Marine Review

THE BUSINESS OF TRANSPORTATION BY WATER

NEW YORK CLEVELAND LONDON

Published Monthly
Vol. 53, No. 4

APRIL, 1923

$3.00 a Year
25c a Copy

Generated on 2024-08-28 00:25 GMT / https://hdl.handle.net/2027/mdp.39015043584120
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

The Scope of Linde Service

Linde Service goes beyond the mere supplying of its products. It includes a carefully planned method of bringing engineering advice and assistance into close touch in the field with the individual user's problems and needs.

Linde thus offers its customers the fruits of practical experience gained by its Service Engineers through their intimate contact with the use and development of the Oxy-Acetylene process.

Through 18 District Sales Offices Linde places its Service within convenient reach of every Linde user.

The growing chain of Linde Distributing Stations and District Sales offices is the logical development of Linde's desire to give its patrons every facility and service in the use of Linde products.

THE LINDE AIR PRODUCTS COMPANY

The Largest Producer of Oxygen in the World

Carbide and Carbon Building, 30 East 42d St., New York City

31 plants—58 warehouses

District Sales Offices:

Atlanta	Chicago	Detroit	New Orleans	Pittsburgh
Baltimore	Cleveland	Kansas City	New York	San Francisco
Boston	Dallas	Los Angeles	Philadelphia	Seattle
Buffalo		Milwaukee		St. Louis

LINDE OXYGEN

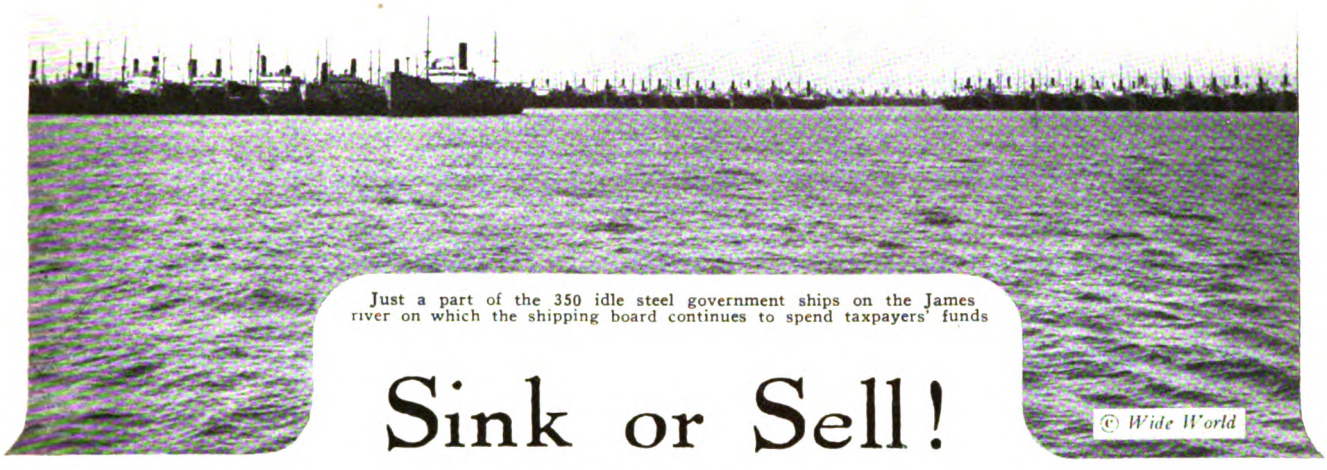
Please mention MARINE REVIEW *when writing to Advertisers*

Generated on 2024-08-28 00:26 GMT / https://hdl.handle.net/2027/mdp.39015043584120
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google

Digitized by Google

Original from UNIVERSITY OF MICHIGAN

Marine Review



Just a part of the 350 idle steel government ships on the James river on which the shipping board continues to spend taxpayers' funds

© Wide World

Sink or Sell!

BY JOHN A. PENTON

SHIP subsidy in an ineffective and consequently dangerous form is to be forced upon the country despite the refusal of congress to act. Of course, President Harding has announced that he will not revive his subsidy proposal when the new congress meets next December. And of course, everyone knows that the new legislative body would kill by direct vote the subsidy bill which the last congress killed by refusing to act.

But what other name but ship subsidy can be given to the continued meddling of the shipping board in the shipping business. Congress votes $50,000,000 to run this octopus for another year. Possibly some salvage might remain from this princely sum so almost immediately the board announces its decision to spend another $8,000,000 in reconditioning some more old German liners.

The board tries to run ships, to interfere in freight rates, to adjust stevedoring charges, to carry the load for impoverished buyers, to establish expensive trade routes, to investigate, to announce plans which unsettle the private owners and then complete the havoc by withdrawing all plans and starting on a new group. Meddling, dabbling, and most of all spending public funds, the board blunders along its way, getting nowhere but hamstringing private shipowners and ignoring the only way in which they can help American shipping—that is, by getting out of business. And the sooner the better.

Shifting with Every Breeze

The board can find a mask for any occasion. When it was fighting for a subsidy—which would have had at least one certain result, the perpetuation of a costly accounting bureau at Washington—the board was desperately sincere in its desire to help private shipping. The chairman testified that government control "has defeated its purpose, for private operation is withering and dying under the blighting competition of unending drain upon the public treasury."

Yet with subsidy only a memory, the board finds that its legal duty, according to an announcement on March 3, is to prepare for the "national defense" and to give the "country a merchant marine."

Our Washington representative reports that the chairman's announcement early in March of a radical plan of liquidation, aroused tremors even in the board's staff that something beneficial in the line of reducing expenses and jobs might be done. But that announcement is now succeeded by others relative to investigations, more plans and more programs, and the staff has settled back into the serenity of a long term government job.

This expensive board is the greatest barrier to the sound upbuilding of American shipping. Its huge fleet, both active and idle, depresses the market and makes the private owner afraid to take decisive action. The board, with taxpayers' funds, has the power to crush any private fleet and that potential ability, whether used or not, is an evil no private firm can safely ignore.

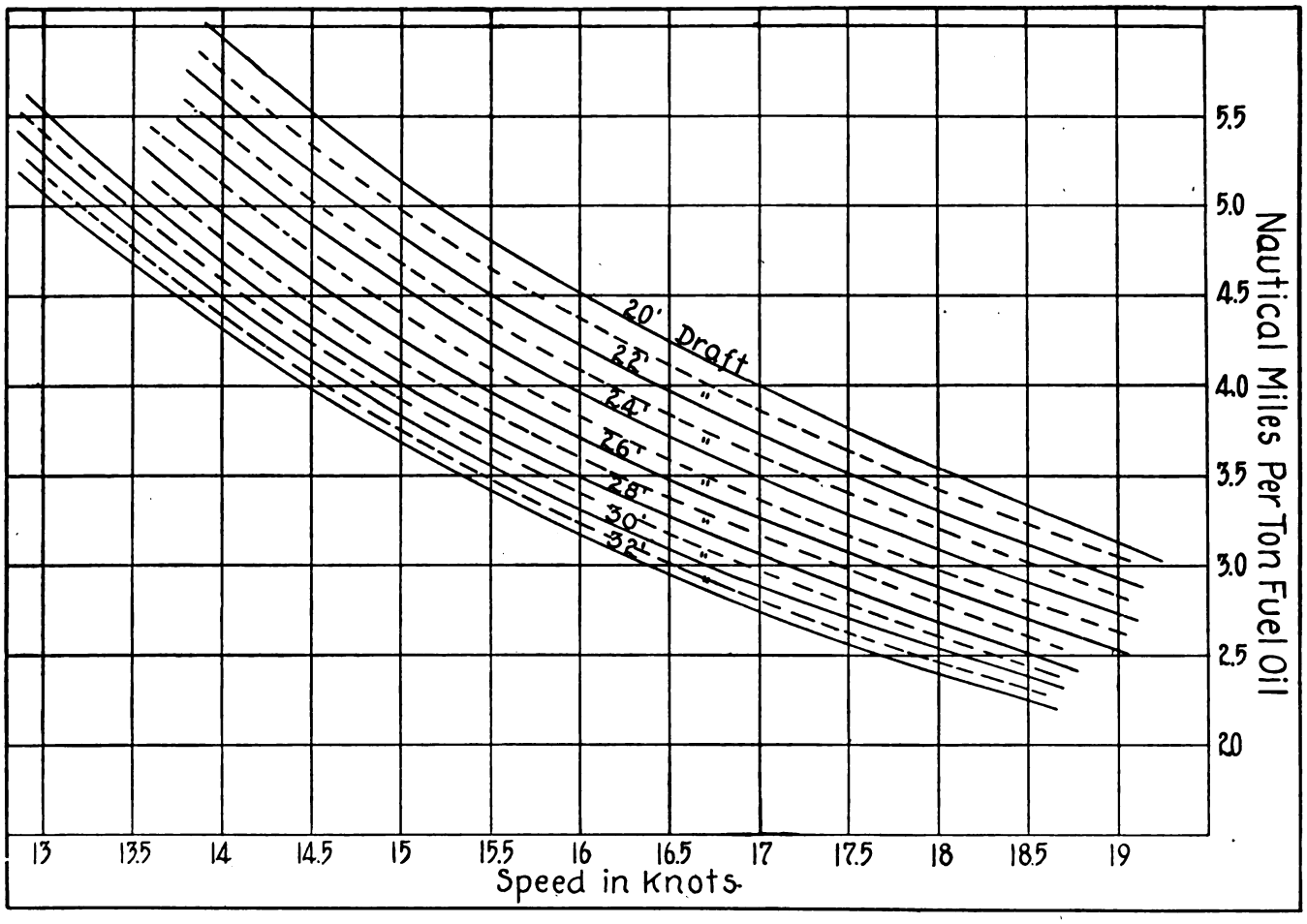
Try a Sure Cure

Nineteen months ago, in these columns, a plan of liquidation was outlined which is as sound and fully as imperative today. That plan is to clean out the 3,000,000 tons of useless ships at once, scrapping or sinking those whose only use today is as an excuse for more money to give watchmen, inspectors and a supervising staff a semblance of work.

The rest of the fleet, from 3,000,000 to 3,500,000 tons, should be offered at auction in regular lots at regular intervals. Haggling over world market

(Continued on Page 135)

Generated on 2024-08-28 00:15 GMT / https://hdl.handle.net/2027/mdp.39015043584120
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN



PEFORMANCE STANDARDS FOR THE LINERS PRESIDENT TAFT, PRESIDENT PIERCE, PRESIDENT GRANT, PRESIDENT CLEVELAND, PRESIDENT JACKSON, PAN AMERICA AND WESTERN WORLD (SEE CURVES PAGES 125 AND 128)

Set Standards for 535-Foot Liners

Operating Performance of American Liners

DATA FOR PERFORMANCE STANDARDIZATION 535-FOOT PASSENGER AND FREIGHT VESSELS

STEAMSHIP PRESIDENT WILSON

Draft ft.	Draft in.	R.P.M.	Observed speed	Tons fuel per 24 hrs.	Pounds fuel per mile	Knots per Ton A actual	Knots per Ton B Theoretical	A/B Correction factor	Weather
19	5¾	115.8	16.88	136.0	751.7	2.97	4.09	0.727	Fair
19	8	115.1	16.10	115.0	666.4	3.36	4.16	0.754	Rough
21	6¼	118.5	17.25	138.8	750.7	2.98	3.68	0.810	
21	7¾	117.5	16.40	153.8	874.3	2.56	4.04	0.634	Fair
21	9	118.1	17.10	132.3	721.8	3.10	3.67	0.845	Rough
22	6½	125.6	17.60	154.0	816.3	2.74	3.37	0.814	
22	7¼	120.1	17.45	151.2	808.7	2.77	3.45	0.804	
23	4½	125.0	17.48	144.0	768.6	2.91	3.34	0.872	
24	3½	118.7	16.65	144.6	808.5	2.76	3.57	0.773	Head wind and heavy sea
24	3¾	126.6	18.10	142.1	733.0	3.05	2.99	1.020	
25	7¼	118.0	16.52	136.3	770.0	2.90	3.47	0.837	
25	9	123.0	17.27	150.3	812.3	2.75	3.15	0.873	
25	9¼	127.0	18.30	154.5	787.9	2.84	2.75	1.033	Fair
26	8	119.1	16.75	162.8	907.1	2.46	3.26	0.755	
27	2	119.3	16.43	128.3	728.3	3.07	3.35	0.917	
27	8	114.7	16.30	123.6	707.7	3.16	3.35	0.944	
27	9½	118.3	16.53	155.0	875.2	2.56	3.24	0.790	
27	10½	122.0	17.45	141.3	755.7	2.96	2.92	1.013	
27	11½	122.4	17.33	132.2	711.9	3.15	2.93	1.075	
28	0	117.0	16.87	124.5	688.7	3.25	3.08	1.055	
28	10½	119.8	16.40	146.0	830.7	2.69	3.21	0.838	
29	2½	123.7	16.90	136.5	753.8	2.97	2.97	1.000	
29	3½	117.3	16.00	135.0	788.0	2.84	3.34	0.850	Rough
29	9½	123.9	17.40	134.7	722.5	3.10	2.74	1.131	
					Average				
25	1⅞	120.3	16.98	140.5	772.5	2.91	3.35	0.869	

STEAMSHIP PRESIDENT GRANT

19	6¼	118.8	18.88	150.3	742.6	3.02	3.23	0.935	Fair
20	5½	112.1	16.90	125.2	687.8	3.24	3.98	0.815	
20	8	113.7	17.50	141.9	753.4	2.96	3.67	0.807	Various; following beam winds
20	9	101.4	15.30	106.1	573.6	3.46	4.81	0.720	
24	8	108.8	16.10	107.9	564.5	3.58	3.81	0.940	Moderate
26	7	115.2	16.60	138.2	774.5	2.88	3.38	0.853	Moderate
27	7	114.0	16.30	134.5	769.1	2.91	3.41	0.854	Calm to strong head winds
					Average				
22	10¾	112.0	16.80	129.2	695.1	3.15	3.76	0.838	

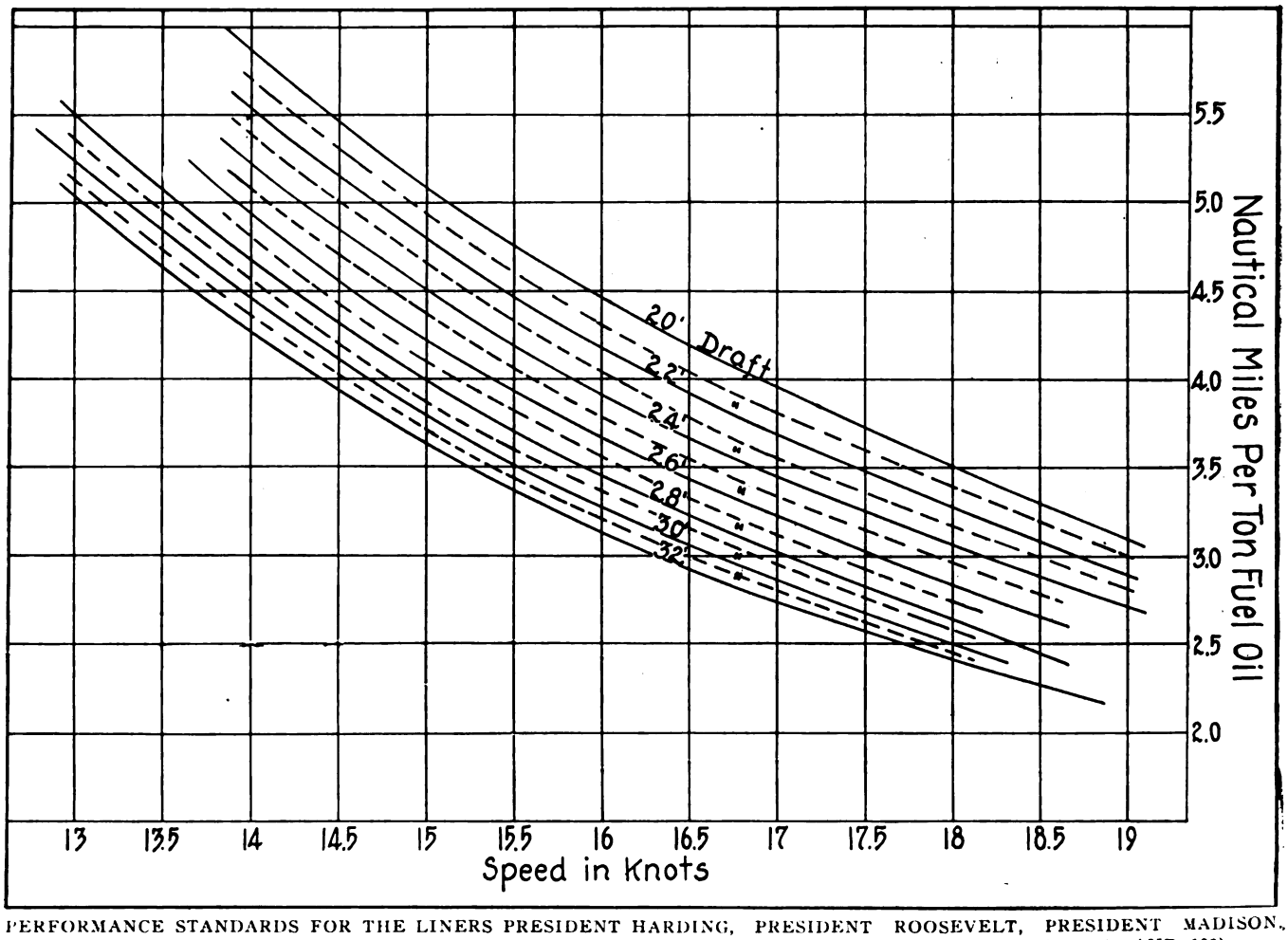
THE fuel conservation committee appointed by the shipping board is continuing the work of establishing the standards of performance for the active vessels of the shipping board fleet. The methods employed in establishing these standards were outlined in recent issues. The first set of standards established which are for the 502-foot passenger vessels were published in MARINE REVIEW, January, 1923.

The standards for the 535-foot passenger vessels and also for the large fleet of Hog Island type cargo vessels built by the American International Shipbuilding Corp., have been completed and are being used by the various operators as a means of determining the efficiency of performance of the vessels of this class which they are operating.

The 535-foot passenger vessels have been subdivided into three classes and a set of performance curves developed for each class.

These curves give the miles per ton of fuel which the vessel should make at a given draft and speed with moderate weather and average bottom conditions. They do not, however, represent imprac-

Generated on 2024-08-28 00:15 GMT / https://hdl.handle.net/2027/mdp.39015043584120
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN



PERFORMANCE STANDARDS FOR THE LINERS PRESIDENT HARDING, PRESIDENT ROOSEVELT, PRESIDENT MADISON, PRESIDENT McKINLEY, PRESIDENT WILSON AND PRESIDENT LINCOLN (SEE CURVES PAGES 124 AND 128)

tical theoretical values, but rather the values that have been obtained by several of the vessels of the class with the equipment and operating personnel working efficiently.

All of the 535-foot passenger vessels have the following characteristics:

Length over all, feet	535
Breadth, feet	72
Depth, feet	50
Loaded draft, feet-inches ..	30-7
Deadweight, tons 11,310	
Speed, knots	17.5

Engine....2 Cross compound turbines
Boilers.....8 Watertube or tubular

The first of these three classes consists of the PRESIDENT TAFT, PRESIDENT PIERCE, PRESIDENT GRANT, PAN AMERICA, WESTERN WORLD, PRESIDENT CLEVELAND, PRESIDENT JACKSON.

These vessels are all fitted with similar propellers. The first five were built by the Bethlehem Shipbuilding Corp., and are equipped with Fore River turbines and Yarrow boilers. The last two were built by the Newport News Shipbuilding & Dry Dock Co., who also built the turbines for these two vessels. These have Babcock & Wilcox boilers.

The second class consists of the PRESIDENT HARDING, PRESIDENT ROOSEVELT, PRESIDENT MADISON, PRESIDENT McKIN-

Operating Performance of American Liners

DATA FOR PERFORMANCE STANDARDIZATION 535-FOOT PASSENGER AND FREIGHT VESSELS

STEAMSHIP PRESIDENT PIERCE

Draft ft.	Draft in.	R.P.M.	Observed speed	Tons fuel per 24 hrs.	Pounds fuel per mile	Knots per Ton A actual	Knots per Ton B Theoretical	A/B Correction factor	Weather
18	0¾	98.5	14.90	118.0	738.8	3.03	5.51	0.550	Mod. to smooth
19	4	103.0	15.50	126.5	761.4	2.94	4.91	0.599	Head wind and sea
19	2¼	108.1	16.69	128.1	716.4	3.13	4.26	0.734	
19	9¼	96.4	13.90	130.9	878.6	2.55	6.07	0.420	Head wind and heavy swell
20	0	103.0	15.25	133.5	816.7	2.75	4.97	0.554	Moderate to smooth
20	2	105.9	16.22	122.2	702.9	3.18	4.36	0.730	Smooth
25	0½	103.4	15.06	120.8	748.4	2.99	4.36	0.687	Variable
26	8¾	105.3	16.06	116.3	675.6	3.13	3.61	0.867	
					Average				
21	**0½**	**103.0**	**15.45**	**124.5**	**754.8**	**2.96**	**4.76**	**0.627**	

STEAMSHIP PRESIDENT TAFT

18	0	110.8	17.30	105.4	568.6	3.93	4.11	0.956	Fair smooth sea
18	9½	113.3	17.10	138.7	757.0	2.96	4.13	0.717	Smooth to heavy sea
19	8	115.4	17.70	127.9	674.4	3.32	3.73	0.893	Fair smooth sea
19	8	108.2	16.10	130.7	757.7	2.95	4.52	0.653	
19	10¼	112.9	16.90	123.6	682.6	3.28	4.07	0.806	Heavy sea N. E. wind
20	5¼	113.2	16.80	139.3	773.8	2.89	4.04	0.716	Moderate
20	6	118.6	17.80	150.5	789.1	2.84	3.57	0.796	
20	11½	108.0	16.00	128.2	747.8	2.99	4.37	0.685	
27	1	113.0	16.70	151.5	846.7	2.65	3.28	0.808	
28	3	116.0	16.30	154.0	881.7	2.54	3.33	0.763	
28	3¾	114.4	16.40	133.3	758.5	2.95	3.28	0.899	Good
					Average				
21	**11½**	**113.1**	**16.83**	**134.8**	**748.9**	**3.03**	**3.86**	**0.784**	

STEAMSHIP AMERICAN LEGION

21	10¾	94.4	15.90	102.1	599.3	3.73	4.84	0.768	Fair
23	0½	109.3	18.00	136.0	701.5	3.18	3.21	0.991	Fair
23	1¼	99.7	16.04	110.4	642.4	3.48	4.08	0.854	Fair
23	2	106.7	17.30	123.8	667.8	3.36	3.40	0.963	Mod. to rough sea
23	2¾	111.3	18.15	132.1	679.3	3.30	3.13	1.054	Moderate sea
24	4½	107.9	17.40	129.4	693.4	3.22	3.32	0.971	Mod. H.W. and sea
24	9¾	110.2	17.57	140.5	746.3	3.00	3.15	0.952	
25	4¼	106.7	17.10	126.8	692.1	3.23	3.33	0.970	Moderate sea
25	4½	108.0	17.61	128.5	681.0	3.28	3.11	1.053	Light to moderate
26	1	105.7	16.66	151.0	845.9	2.65	3.40	0.779	
26	5	108.0	17.10	132.5	723.2	3.09	3.20	0.966	Strong wind ahead
27	2	108.1	16.90	139.0	767.6	2.92	3.18	0.918	
30	0¼	101.3	15.80	138.8	819.9	2.74	3.35	0.818	
					Average				
24	**11⅛**	**105.9**	**17.04**	**130.0**	**712.3**	**3.17**	**3.45**	**0.919**	

Generated on 2024-08-28 00:14 GMT / https://hdl.handle.net/2027/mdp.39015043584120
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Operating Performance of American Liners

DATA FOR PERFORMANCE STANDARDIZATION: 535-FOOT PASSENGER AND FREIGHT VESSELS

STEAMSHIP PRESIDENT CLEVELAND

Draft ft.	Draft in.	R.P.M.	Observed speed	Tons fuel per 24 hrs.	Pounds fuel per mile	Knots per Ton — A actual	Knots per Ton — B Theoretical	A/B Correction factor	Weather
21	0	110.8	16.4	123.5	702.5	3.18	4.16	0.765	Fair
21	2½	108.8	16.29	119.8	686.1	3.26	4.18	0.780	Rough sea
21	3½	113.4	16.67	128.5	719.2	3.11	3.99	0.780	Moderate to rough
22	0	112.9	16.68	114.8	642.1	3.48	3.88	0.898	Moderate to rough
22	8½	121.4	18.32	136.4	694.6	3.22	3.11	1.036	Head winds & sea
24	2¼	120.3	18.18	127.2	652.7	3.43	3.00	1.143	Very good
24	2½	118.6	18.10	128.6	662.8	3.83	3.02	1.120	Moderate
24	3	116.6	17.70	125.4	661.0	3.38	3.17	1.066	Fair to moderate
24	5½	112.7	17.10	122.5	668.3	3.35	3.37	0.995	Fair
24	10	117.1	17.14	130.5	710.4	3.15	3.33	0.945	Moderate
25	1¼	115.0	17.00	148.4	814.7	2.75	3.36	0.818	Strong head winds mod. to rough sea
25	3½	113.3	16.60	121.5	688.9	3.27	3.52	0.929	Fair
25	3½	101.6	15.20	86.2	529.2	4.23	4.24	0.998	Good
25	7¼	111.1	16.80	119.2	662.0	3.38	3.40	0.994	Fair to moderate
26	0	115.6	17.30	125.6	677.3	3.30	3.14	1.051	Fair
26	1¼	112.9	16.63	124.7	699.6	3.20	3.41	0.940	Moderate
26	3½	108.2	15.70	115.0	683.4	3.27	3.83	0.854	Fair to moderate
26	3½	113.1	16.45	129.0	731.0	3.06	3.47	0.882	Good
26	6¾	108.6	16.47	121.8	689.9	3.24	3.44	0.942	Moderate
26	8½	115.2	17.40	123.5	662.2	3.38	3.05	1.107	Clear
26	9¾	112.6	16.89	121.0	668.4	3.35	3.24	1.033	Variable
27	8	113.6	16.60	122.7	689.6	3.24	3.27	0.992	Strong H.W. & sea
28	0¼	112.0	16.50	120.6	681.8	3.28	3.27	1.002	Strong H. W. & sea
29	1¼	112.6	17.00	122.0	669.5	3.34	2.97	1.124	Very good
29	4½	116.5	17.50	121.6	648.3	3.45	2.75	1.252	Moderate
29	4½	111.6	16.46	121.7	696.1	3.24	3.17	1.022	Good
29	8	114.5	17.10	126.7	691.2	3.24	2.88	1.125	Very good
29	4½	111.6	16.46	121.7	695.1	3.24	3.17	1.022	Good
29	10¼	103.8	15.56	106.7	639.7	3.50	3.54	0.989	Good
30	0¼	113.7	16.74	126.9	707.5	3.16	2.98	1.060	Moderate
30	0¼	112.8	16.26	124.4	714.0	3.14	3.18	0.988	Good
					Average				
26	**1¼**	**113.2**	**16.84**	**127.4**	**680.9**	**3.32**	**3.36**	**0.988**	

STEAMSHIP PRESIDENT LINCOLN

21	8¾	117.5	16.70	120.8	675.1	3.31	3.87	0.855	Fair
22	0½	120.8	17.37	124.8	670.5	3.34	3.53	0974	Fine
22	1½	119.3	16.88	128.0	707.7	3.16	3.74	0.845	Strong head winds and heavy swells
22	2½	118.7	17.39	119.2	639.9	3.50	3.51	0.998	Fair
22	4½	116.8	16.38	123.9	705.9	3.17	3.94	0.805	Head dind: Rough sea
22	4¾	117.0	16.65	123.0	689.4	3.25	3.81	0.853	
22	9½	120.0	17.48	125.5	669.5	3.34	3.40	0.983	Fine
23	0	109.5	16.19	123.9	714.3	3.13	3.93	0.797	Fair
23	0¾	118.0	16.61	122.4	686.0	3.25	3.73	0.872	Fair
26	8½	119.8	16.90	120.9	667.6	3.36	3.19	1.053	Fair
27	0¼	120.3	17.16	120.3	654.3	3.42	3.06	1.117	Fair
28	0½	117.6	16.19	117.8	679.1	3.30	3.37	0.980	Fair
28	4	119.3	16.62	125.9	706.8	3.17	3.16	1.003	Fair
28	7¼	116.8	16.00	128.0	746.6	3.00	3.41	0.880	Rough sea
28	11¾	107.8	15.00	108.5	675.1	3.32	3.89	0.854	Rough sea
29	8¼	119.0	16.47	131.0	792.2	3.01	3.11	0.968	Fair
30	0	119.1	16.56	123.1	693.8	3.22	3.05	1.055	Fine
					Average				
25	**2⅞**	**117.5**	**16.62**	**122.8**	**692.5**	**3.25**	**3.51**	**0.926**	

STEAMSHIP SOUTHERN CROSS

21	10¼	106.8	16.80	135.3	751.6	2.98	3.88	0.768	Strong head winds
22	4½	112.2	18.07	137.5	708.5	3.15	3.26	0.965	
22	6½	107.0	17.43	139.6	747.5	2.99	3.51	0.853	Moderate
23	3½	108.3	17.36	128.0	688.2	3.25	3.45	0.943	Variable
24	11¾	105.3	16.98	143.3	787.7	2.84	3.43	0.829	Moderate
26	8¼	106.7	17.01	138.8	759.8	2.94	3.20	0.918	
26	10¼	107.4	17.11	142.0	774.6	2.89	3.15	0.918	Good
27	4½	107.1	17.48	137.0	731.5	3.06	2.95	1.037	
26	2¼	105.1	16.87	139.4	771.2	2.91	3.30	0.882	
28	0½	105.6	16.30	135.0	773.0	2.90	3.35	0.865	
					Average				
25	**2¼**	**107.2**	**17.14**	**137.6**	**749.3**	**2.99**	**3.35**	**0.893**	

STEAMSHIP PRESIDENT JACKSON

20	7½	120.3	18.66	135.7	678.0	3.30	3.20	1.031	Moderate
21	3	115.9	17.90	127.0	650.9	3.38	3.43	1.014	Moderate
21	6¾	118.3	18.30	135.0	688.2	3.25	3.23	1.005	Moderate swell
22	2¾	119.6	18.00	141.5	722.1	3.05	3.28	0.930	Rough
22	5½	117.5	18.50	121.4	612.6	3.64	3.08	1.182	Moderate with fog
22	10	116.7	17.90	127.4	663.8	3.37	3.26	1.033	Moderate
26	0¼	115.7	17.30	131.2	709.2	3.16	3.13	1.010	Strong H. W. & sea
26	5¼	113.2	16.40	125.6	713.7	3.13	3.48	0.900	
26	5½	115.2	17.07	129.5	696.6	3.16	3.20	0.988	Moderate with fog
29	5	113.7	16.30	125.0	715.3	3.13	3.23	0.970	Moderate
29	7	113.3	16.50	130.5	735.6	3.03	3.13	0.968	Moderate to rough
					Average				
24	**5¼**	**116.2**	**17.53**	**129.9**	**689.6**	**3.19**	**3.24**	**0.985**	

STEAMSHIP PRESIDENT McKINLEY

21	1½	121.1	17.30	136.2	722.9	3.04	3.67	0.829	Rough
22	0¾	115.1	16.70	142.0	780.6	2.82	3.83	0.737	
22	7	118.3	17.30	129.5	696.4	3.20	3.50	0.915	Fair
22	9½	125.0	18.23	157.1	804.3	2.79	3.11	0.898	
23	4	117.6	17.10	125.3	682.4	3.26	3.50	0.932	Moderate
27	5¾	112.7	16.09	133.4	773.8	2.89	3.48	0.859	
27	7¼	111.6	14.40	123.1	797.0	2.80	4.44	0.631	Rough to fair
29	4¼	116.5	15.82	126.7	747.5	3.00	3.42	0.878	
29	5¾	122.0	16.60	134.0	753.4	2.97	3.08	0.965	Variable
30	1	118.1	16.58	127.2	715.4	3.12	2.99	1.043	Fair
					Average				
25	**7**	**117.8**	**16.61**	**133.5**	**747.4**	**2.99**	**3.50**	**0.854**	

LEY, PRESIDENT WILSON, PRESIDENT LINCOLN.

These were built by the New York Shipbuilding Corp., and have similar propellers and are equipped with Fore River turbines and Babcock & Wilcox boilers.

The third class consists of the PRESIDENT JEFFERSON, SOUTHERN CROSS, AMERICAN LEGION.

These three were built by the New York Shipbuilding Corp., and are fitted with Westinghouse turbines and Babcock & Wilcox boilers.

From the tabulated performance of these vessels it will be noted that the efficiency of performance varies from 98.8 to 62.7 per cent for the various vessels. Eight of the 16, however, show over 90 per cent efficiency and all except two which on their earlier voyages were subjected to inefficient and poor operation show over 80 per cent, the average for the entire class being 87 per cent.

Instructions for Using Performance Curves

The curves on these charts show the number of nautical miles that a ship should travel on a ton of fuel for various speeds and drafts, and have been adopted as a standard for the ships as designated.

In arriving at this standard, due consideration was given for the increase in power required to drive the ship at sea over that required under trial trip conditions, and the increased steam consumption of the machinery at sea over that on tests. It is not expected that the ship will do as well on every voyage, as the curves show, as rough weather would decrease the mileage, yet in smooth seas the showing should be better, and the average performance should be equal to the standard, provided the ship and equipment is in proper condition, and properly operated.

The procedure for obtaining the performance of a ship on a voyage is as follows:

Divide the distance in nautical miles traveled by the fuel in tons consumed. This will give the actual nautical miles per ton of fuel.

From the chart find the standard nautical miles per ton of fuel for the draft and speed on this voyage as follows:

On horizontal base line pick out average speed of the voyage and run up this line in vertical direction until it intersects the curve corresponding to average mean draft, from this point follow over on horizontal line to read the miles per ton of fuel which represents standard performance.

Divide the actual performance by the standard and multiply by one hundred. This will give the percentage performance for the voyage.

Generated on 2024-08-28 00:14 GMT / https://hdl.handle.net/2027/mdp.39015043584120
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Large Gain in 1922 for Frisco Shipping

Large gains in shipping into and out of the port of San Francisco are revealed by a review of the year 1922 just completed by J. M. Daily, manager of the marine department of the San Francisco chamber of commerce. This review shows that during the year 5732 vessels, bringing 11,350,382 tons of cargo arrived in San Francisco, as compared with 4352 vessels with 8,204,869 tons of cargo in 1921. The departures in 1922 numbered 5740, with cargoes aggregating 11,215,892 tons. In 1921 the departures were 4387, with a tonnage of 8,196,932. Thus, the arrivals increased by 1380 ships and 3,145,513 tons of cargo; while the departures increased by 1353 vessels and the tonnage gained 3,018,960 tons.

During 1922, ships arriving from foreign ports, including both steam and sail vessels, totaled 2,034,110 tons. From American, other than coast ports, the arrivals represent 2,690,058 tons, while from coast ports, the ship tonnage arriving reached a total of 6,626,214. Of the departures last year, 2,263,442 tons went to foreign ports; 2,210,420 tons to American ports other than coast, and 6,742,030 tons to coast ports. The arrivals were divided 11,217,912 tons of cargo for steamers, and 132,470 tons for sailing vessels; the departures showing that 11,057,733 tons went out on steamers, and 158,159 tons on sailing ships. The 6-year record follows:

Year	—No. of Vessels— Arrivals	Departures
1922	5732	5740
1921	4352	4387
1920	4816	4820
1919	4617	4696
1918	4561	4566
1917	5352	5417

Chairman Lasker of the shipping board has stated that approximately 500 employes will be discharged before the end of the fiscal year, June 30, and payrolls will be reduced at the rate of approximately $1,100,000 per year. In July, 1921, the board was employing about 4300 persons and had payrolls aggregating $15,800,000. Last December, the personnel had been reduced to 4000 and payrolls to $8,950,000. Adjustment of claims and liquidation of the properties and surplus materials of the board are largely responsible for the anticipated reductions.

The big vessels of the world rank as follows: MAJESTIC 915 feet long, 56,551 gross tons; LEVIATHAN 907.6 feet, 54,282 gross tons; BERENGARIA, *formerly* IMPERATOR, 882.9 feet, 51,969 gross tons; OLYMPIC, 852.5 feet, 46,359 gross tons; AQUITANIA, 868.7 feet, 45,647 gross tons,

Operating Performance of American Liners

DATA FOR PERFORMANCE STANDARDIZATION: 535-FOOT PASSENGER AND FREIGHT VESSELS

STEAMSHIP PRESIDENT ROOSEVELT

Draft ft.	Draft in.	R.P.M.	Observed speed	Tons fuel per 24 hrs.	Pounds fuel per mile	—Knots per Ton— A actual	B Theoretical	A/B Correction factor	Weather
21	0	126.2	17.94	147.2	764.1	2.92	3.45	0.846	
21	5½	122.9	17.30	129.0	695.9	3.21	3.63	0.884	
21	11	129.9	18.69	147.5	736.6	3.04	3.03	1.003	
22	1½	126.3	17.90	148.2	772.7	2.90	3.35	0.865	
22	10½	120.4	16.49	119.3	675.2	3.31	3.81	0.869	Rough
23	0½	121.1	17.30	138.4	746.7	3.00	3.47	0.864	
25	9	123.8	18.17	148.2	761.3	2.94	2.83	1.038	
26	9¼	118.6	16.73	124.5	694.0	3.22	3.26	0.988	
26	10	127.0	18.50	161.0	812.3	2.76	2.62	1.053	
27	7¾	116.0	16.70	123.9	692.4	3.23	3.18	1.015	
28	7	126.6	17.80	163.0	854.6	2.62	2.71	0.961	
29	4½	125.0	17.70	143.3	755.6	2.96	2.66	1.112	
					Average				
24	**9⅜**	**123.7**	**17.60**	**141.1**	**748.3**	**3.00**	**3.17**	**0.9463**	

STEAMSHIP PRESIDENT MADISON

21	11	117.4	17.40	124.5	667.5	3.36	3.66	0.919	Moderate
22	5¼	113.1	16.35	124.1	708.1	3.16	3.93	0.805	Head wind and sea
22	2½	121.2	16.94	143.8	792.0	2.82	3.70	0.763	Variable
22	4¼	116.8	17.30	112.4	606.2	3.96	3.53	1.045	Moderate and fog
22	7	118.7	17.14	134.3	731.0	3.06	3.57	0.858	Calm
23	3¼	119.3	17.19	139.8	758.7	2.95	3.47	0.850	Moderate
26	4¾	114.9	16.40	102.7	584.2	3.83	3.45	1.110	Moderate
26	10½	119.8	16.44	129.3	733.8	3.05	3.38	0.903	Strong beam wind and sea
27	6	118.1	16.30	125.0	715.4	3.13	3.38	0.927	Rough
28	7½	111.2	16.20	120.5	693.9	3.22	3.31	0.973	Moderate to smooth
X	X	X	X	X	X	X	X	X	
29	2½	114.5	14.64	124.3	792.2	2.82	4.12	0.684	Very bad
					Average				
24	**10¼**	**117.1**	**16.77**	**125.6**	**699.1**	**3.25**	**3.54**	**0.918**	

STEAMSHIP PAN AMERICA

21	11½	116.3	16.85	146.0	808.7	2.77	3.81	0.727	
22	7½	115.3	17.00	125.7	700.0	3.20	3.66	0.875	
23	10½	105.9	17.90	128.0	667.4	3.36	3.15	1.067	
25	1	113.1	17.03	125.5	687.8	3.26	3.34	0.977	
25	5¼	114.4	17.12	124.0	676.0	3.31	3.27	1.012	Fair
25	6½	99.9	15.90	112.0	657.4	3.41	3.81	0.895	
25	10½	110.1	16.58	141.0	793.7	2.82	3.47	0.813	
26	9½	116.6	17.05	138.6	758.7	2.95	3.17	0.932	
26	10	116.8	18.60	139.0	697.5	3.21	2.89	1.110	
26	11¾	116.3	16.85	146.8	812.6	2.76	3.50	0.790	Fair
27	0¾	115.5	17.15	144.0	783.6	2.86	3.10	0.823	Good
27	1¾	112.9	16.34	135.0	771.1	2.90	3.44	0.844	
27	6	117.9	17.50	133.0	709.4	3.16	2.93	1.078	Variable
27	6½	99.4	14.30	123.5	806.0	2.78	4.32	0.644	Fair
27	11	113.3	16.64	141.0	790.8	2.83	3.22	0.879	
					Average				
25	**9⅞**	**111.0**	**16.85**	**133.5**	**741.4**	**3.03**	**3.41**	**0.890**	

STEAMSHIP WESTERN WORLD

X		X	X	X	X	X	X	X	
21	10	103.7	15.10	108.0	667.5	3.35	4.81	0.697	X_1
22	6	116.2	17.30	131.0	706.7	3.17	3.54	0.895	Fair
23	5	113.9	17.30	128.0	690.5	3.24	3.43	0.945	
X		X	X	X	X	X	X	X	
24	9	105.7	15.30	142.0	866.2	2.59	4.25	0.610	X_2
25	4¾	120.0	17.40	133.0	713.4	3.14	3.16	0.993	
26	1¼	117.4	16.60	138.5	778.7	2.88	3.43	0.840	
X	X	X	X	X	X	X	X	X	
27	1½	120.4	18.00	125.0	648.1	3.46	2.76	1.254	Moderate X_3
27	9	117.6	17.10	124.8	681.1	3.29	3.06	0.930	
					Average				
25	**4½**	**117.0**	**17.14**	**131.1**	**714.1**	**3.14**	**3.32**	**0.946**	

X—Omitted from average.
X_1 X_2—2-day passage.
X_3—Oil soundings questioned.

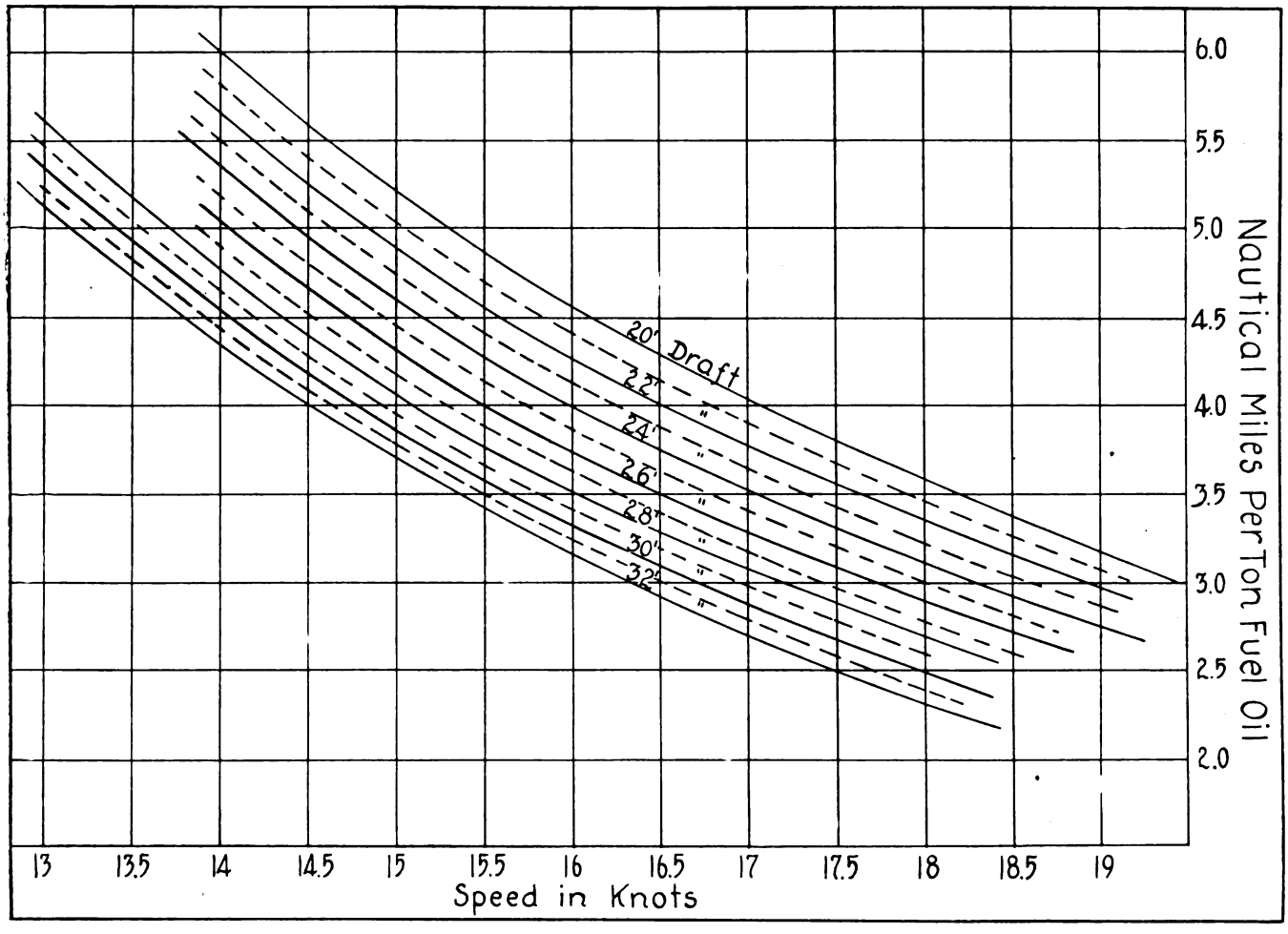
STEAMSHIP PRESIDENT JEFFERSON

21	3	104.5	16.75	130.0	724.4	3.09	3.99	0.775	Fair
21	7	108.4	17.30	147.2	794.2	2.82	3.69	0.764	Various
21	8¾	110.2	17.90	151.5	790.0	2.83	3.41	0.830	
22	1¾	104.1	17.10	130.3	711.1	3.14	3.71	0.846	Fair
22	7	105.0	17.00	124.1	681.3	3.28	3.70	0.887	Fair
22	8¼	102.6	16.50	131.5	743.8	3.01	3.91	0.770	Fair
22	9½	110.4	18.30	142.0	724.2	3.09	3.12	0.990	Fair
23	1	103.3	16.60	138.0	775.4	2.88	3.81	0.757	Fair
24	0¼	104.7	16.20	138.5	797.9	2.81	3.89	0.723	Heavy head winds
26	6	103.4	16.00	128.2	747.5	2.99	3.67	0.815	Fog and clear
26	6½	105.5	16.00	159.5	930.4	2.41	3.67	0.657	Heavy head winds
27	1¾	102.7	16.20	120.0	691.0	3.24	3.51	0.924	Fine
29	5	106.6	16.06	140.0	813.6	2.75	3.35	0.821	Various
					Average				
23	**11½**	**105.4**	**16.76**	**136.9**	**763.4**	**2.94**	**3.64**	**0.808**	

STEAMSHIP PRESIDENT HARDING

20	5¾	124.8	16.80	146.0	807.7	2.76	4.00	0.690	Rough
20	8¾	130.1	18.29	170.0	865.4	2.58	3.31	0.780	
21	5½	125.2	17.50	180.3	961.5	2.33	3.58	0.650	Strong head winds
22	0	131.0	18.45	154.0	779.0	2.88	3.14	0.917	Head winds
22	8	128.0	17.80	144.5	760.2	2.95	3.28	0.900	Moderate
23	8	125.5	17.70	145.7	766.3	2.92	3.22	0.906	
24	4	125.5	18.30	125.5	640.0	3.50	2.96	1.172	
25	4	126.5	17.40	152.4	817.4	2.75	3.15	0.873	Moderate
27	3	127.2	18.00	159.0	824.7	2.71	2.71	1.000	Moderate
28	6	126.5	18.00	179.0	929.9	2.41	2.60	0.928	Fair to moderate
28	9½	122.3	17.80	137.6	722.9	3.10	2.66	1.165	Moderate
29	2	128.5	18.05	152.0	785.9	2.85	2.56	1.113	
					Average				
24	**6¾**	**126.7**	**17.84**	**153.8**	**805.0**	**2.81**	**3.10**	**0.906**	
					Grand Average				
24	**5⅛**	**113.9**	**16.90**	**133.0**	**725.0**	**3.08**	**3.54**	**0.870**	

Generated on 2024-08-28 00:14 GMT / https://hdl.handle.net/2027/mdp.39015043584120
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN



PERFORMANCE STANDARDS FOR THE LINERS PRESIDENT JEFFERSON, SOUTHERN CROSS AND AMERICAN LEGION (SEE CURVES PAGES 124 AND 125)

Shipowners Can Stop Pilferage Losses

IN OCEAN freight transportation losses due to pilferage and damage of parcels containing valuable and attractive articles have been a source of great annoyance and monetary loss which in the last analysis is borne by the consumer. The fact that losses are paid by insurance companies does not in any way minimize the direct importance to the shippers and the carriers of the elimination of these losses.

It is clear that complete interdependence of interests exist as between the manufacturer who ships his products to a foreign market, the steamship owner and operator who carries these products, and the purchaser and ultimate consumer. Complete satisfaction of the ultimate consumer in price for the quality given and in good service will increase the demand and thus make better business for the manufacturer and the carrier. A condition could easily arise where continued losses would ultimately destroy the business with resulting loss to both manufacturer and carrier. The prestige of the manufacturer and carrier suffers under these conditions.

When losses occur due to pilferage and damage enroute, an attempt naturally is made at once to fix this loss on the shipowner and operator. These claims against the ship mean serious financial losses and a great deal of annoyance and friction, at times threatening to disturb the good relations which should exist between shipper and carrier.

The managers of the ship attempt to hold the officers of the ship responsible while the goods are on board. Often for cargoes subject to pilferage a receipt is given by the chief officer to the dock superintendent indicating that the ship has received in good condition certain shipments. On the discharge of the cargo at destination, the chief officer demands a receipt for safe delivery. If there is any discrepancy between the delivery and the receipt of the goods the blame for loss is laid directly to the ship and its officers. When loss occurs in this manner the officer in charge is questioned and cautioned to use greater care to prevent such losses on board enroute. This matter is a source of constant trouble to ships' officers and tends to diminish their efficiency in their primary duty, the safe and careful navigation of the ship. The carrier would be justified in refusing to receive flimsily packed parcels and in the interests of all concerned should demand from the shipper proper and secure packing of shipments. On account of the keen competition existing today, however, shipments no matter how flimsily packed would probably be accepted by some one or other of the carriers. An agreement among all carriers on a certain standard of packing for export if conscientiously lived up to would have a marked effect in improving present methods.

The bureau of foreign and domestic commerce in its publication, *Commerce Reports* for Feb. 19, in a report from Chile states that a recent Chilean customs ordinance provides that a fine may be imposed upon the captain of the vessel where cases are found to have been opened or their contents removed without the written permission of the customs authorities. An appeal was made by the steamship company for dismissal of such a fine in a recent case at Valparaiso on the grounds that this was a distortion of the intent of the law. It was found that 460 parcels of cargo had had their

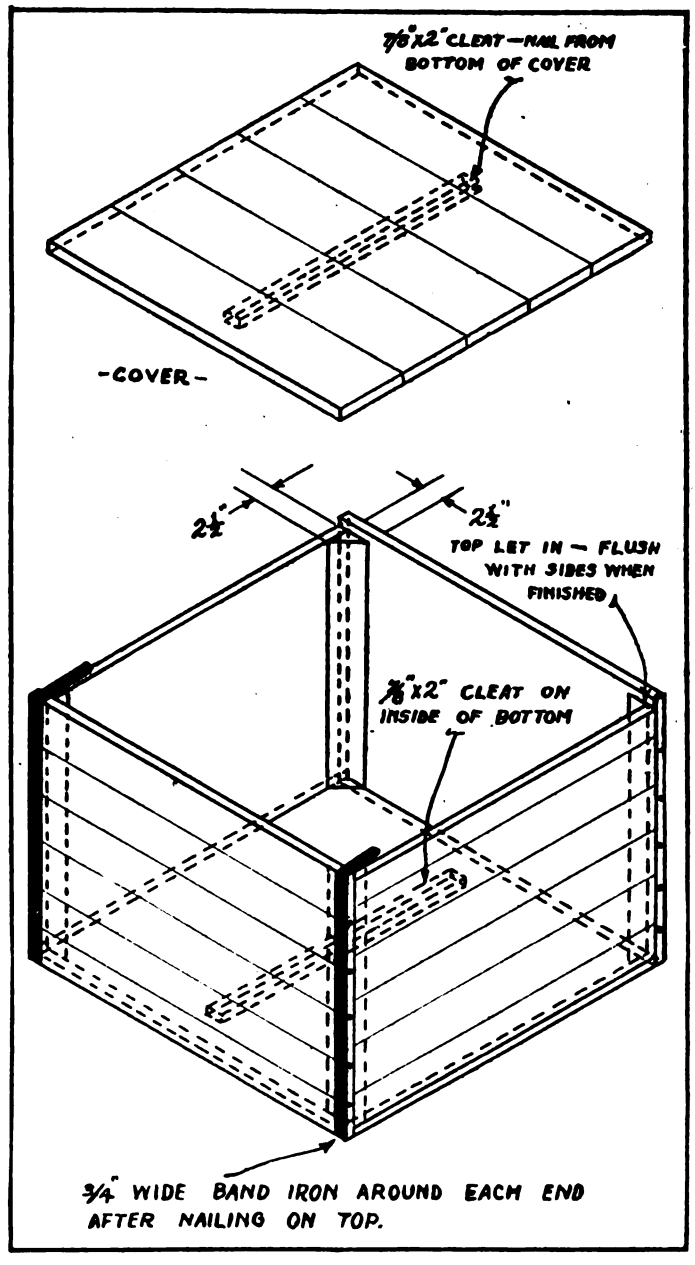
Generated on 2024-08-28 00:15 GMT / https://hdl.handle.net/2027/mdp.39015043584120
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

contents stolen before being discharged. A fine of 5 pesos per package amounting at present rate of exchange to $281.75 was imposed on the captain of the vessel. The Chilean supreme court upheld the original decree and the captain of the vessel was ordered to pay the fine.

If responsibility for safe delivery is to rest as heavily as in this instance on the steamship company, it follows that they will be increasingly interested in pilferage proof packing of goods, they receive. The steamship companies should strongly urge good packing. It saves not only loss of money but eliminates annoyance and causes for fines.

Recognizing the enormous losses entailed and also the dissatisfaction, annoyance and friction engendered in relations with foreign customers due to lax and improper packing, the transportation division of the bureau of foreign and domestic commerce has made a careful study of the methods of packing for export used by a number of large corporations. It is stated in the report on this investigation that there has been a decided improvement, so that much of the past criticism of American packing is no longer justified. Packing rooms of the principal exporters of leather, boots, shoes, rubber goods and paper, in the New England district were visited.

A large exporter of women's shoes in the days following the war had suffered heavily both financially and in prestige through pilferage. Finally conditions became so grave that insurance was refused for pilferage risks on their foreign shipments. By adopting uniform methods and great care in packing not a single pair of shoes has been lost during the past year through pilferage. This company is now using a standard export case made in its own factory. Tongue and grooved board ¾-inch thick is used, with waterproof paper lining inside the case. A steel strap runs around the inside of the case including the head and is sealed on the outside. A steel strap also is on the outside at each end. This case will withstand rough handling and is just about pilferage proof. It costs only a little more than the average shipping case.


⅞"x2" CLEAT—NAIL FROM BOTTOM OF COVER
-COVER-
2½"
2½"
TOP LET IN — FLUSH WITH SIDES WHEN FINISHED
⅞"x2" CLEAT ON INSIDE OF BOTTOM
¾" WIDE BAND IRON AROUND EACH END AFTER NAILING ON TOP.

PILFERAGE PROOF PACKING CASE OF TONGUE AND GROOVED LUMBER

Another shoe factory makes its own export packing boxes of ⅞-inch tongue and grooved lumber. The cases are strongly constructed and are designed to carry 60 pairs of shoes. They are lined with waterproof paper and are iron strapped at the ends. A strong wire is run around the center and the ends joined and sealed with lead and let in to the head of the case. On account of particularly difficult conditions existing at points on the west coast of South America, double cases are used to prevent pilferage.

The accompanying illustration shows a typical export case recommended by the transportation division of the bureau of foreign and domestic commerce. All four ends of the box are nailed to each other and reinforced by corner posts which are nailed both from the inside and outside and the nails clinched. In this way pilferage by slipping out a board or boards of the case is made practically impossible without destruction of the entire case. The top and bottom are made from tongue and grooved boards held together as one piece by the use of an inside cleat, making it necessary to remove the entire cover before one or two boards can be slipped out . This box is constructed throughout of ⅞-inch common pine tongue and grooved boards; around each end ¾-inch iron bands are fastened for additional security. The use of this type of box or case brings a decreased percentage of loss from pilferage and indicates that this particular sort of theft may be practically eliminated if a real effort is directed toward protection.

Any established steamship company doing a steady, regular business becomes through recurring constant contact entirely familiar with the conditions, customs, manners and peculiarities existing both at home and in foreign ports. It would be entirely proper for the steamship company to stress the importance of proper containers for shipments intended for export by recommending methods, or, using the complete practical data, specifications and illustrations prepared by such a government agency as the bureau of foreign and domestic commerce, the operator could send copies of such data and specifications with the suggestion that they be followed by the exporter in the preparation of boxes for shipment.

By spending a small fraction of the present outlay for claims due to damage and pilferage, all the principal exporters and shippers would be fully advised of how to improve their packing methods in order to overcome losses now due to carelessness. Such data could be sent out to exporters and shippers by some central agency such as the American Steamship Owners association. At any rate, the responsibility for safe carriage and delivery of shipments must after acceptance at the dock lie with the ship.

Generated on 2024-08-28 00:15 GMT / https://hdl.handle.net/2027/mdp.39015043584120
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

German Merchant Fleet Grows Rapidly

On Dec. 31, 1922, Germany was building 95 steam and motor vessels having a gross tonnage of 404,241, figures only exceeded by the United Kingdom. Today, Germany's mercantile marine is approximately 2,250,000 tons, or nearly half of what it was in 1913. This represents a fourfold increase over 1920. The extent to which the German shipbuilding industry has recovered since the war may be appreciated from the fact that in 1913 the total output of the country was 162 vessels of 465,226 gross tons, the figures for 1921 were 242 vessels and 509,064 gross tons respectively, while during last year 109 ocean going steamers, aggregating 441,781 gross tons, were launched. Private enterprise is not alone responsible for this gain. For the purpose of dealing with the financial side of the task of rebuilding the German mercantile marine, the Schiffbau Freuhand bank was instituted in March 1921, with a capital of 12,000,000,000 marks this being the amount granted by the government as compensation to shipowners for war losses. This sum was intended to cover part of the cost of building about 1,600,000 tons of shipping. Later, this grant was increased to 18,000,000,000 marks to compensate for heavily increased costs in paper marks.

In 1913, Germany ranked second among the countries of the world in regard to total seagoing tonnage, of which she possessed 5,082,061 gross tons, as compared with the 20,000,000 tons of the British empire. Six months after the armistice and before she had complied with the terms of the Versailles treaty in the matter of surrender and breaking up of mercantile tonnage, Germany had only fallen one place; the British empire and the United States alone possessing greater tonnage—18,607,875 and 10,782,170 gross tons respectively.

By June 1920, the German tonnage had been reduced to 672,671, and in the matter of size her merchant fleet was surpassed by those of the British empire, the United States, France, Japan, Italy, Norway, Holland, Sweden, Spain and Denmark. During the next two years shipbuilding in Germany proceeded actively, with the result that by June 1922, she had nearly trebled the 1920 figure and had overtaken Denmark, Spain, and Sweden.

Danes Build Twin Screw Motorship

THE new twin screw motorship TENNESSEE was built by Burmeister & Wain Ltd., Copenhagen, Denmark, to the order of Wilhelmsen, Tonsberg, Norway. She is a sistership of the TENERIFFA and THALATTA recently delivered to the same owners. The vessel is specially designed for long voyages, her oil fuel capacity being sufficient for a radius of over 30,000 miles.

The vessel is built to Lloyds class 100 A. I. special survey, awning deck with freeboard and with certificate for carrying oil fuel in her double bottom.

The leading particulars are as follows:

Length overall, ft. in.	444	4
Length b.p. ft. in.	425	5½
Breadth molded, ft. in.	55	0
Depth molded to awning deck, ft. in.	38	6
Depth molded to upper deck, ft. in.	30	6
Depth molded to lower deck, ft. in.	22	5½
Gross, tons	7124	
Net register, tons	4482	
Capacity of holds about, cu. ft. grain	570,000	
Oil fuel capacity, about, tons	1300	
Deadweight, about, tons	11,000	
Draft loaded, ft. in.	29	0
Average speed at sea, knots	11½	
Normal indicated horsepower	3100	
Normal consumption of fuel oil per 24 hours, tons	10	

The hull is subdivided into eight compartments by means of seven watertight bulkheads carried up to the upper deck, there being five cargo holds, three forward and two abaft the machinery space. A double bottom tank extending from peak bulkhead to peak bulkhead is fitted for the carriage of fuel oil or water ballast. In addition, a deep tank for oil fuel is fitted between the shaft tunnels in No. 4 hold. The fore peak is arranged for water ballast and the aft peak for fresh water.

The ship has three complete decks of steel supported by a system of girders and wide spaced pillars in holds,

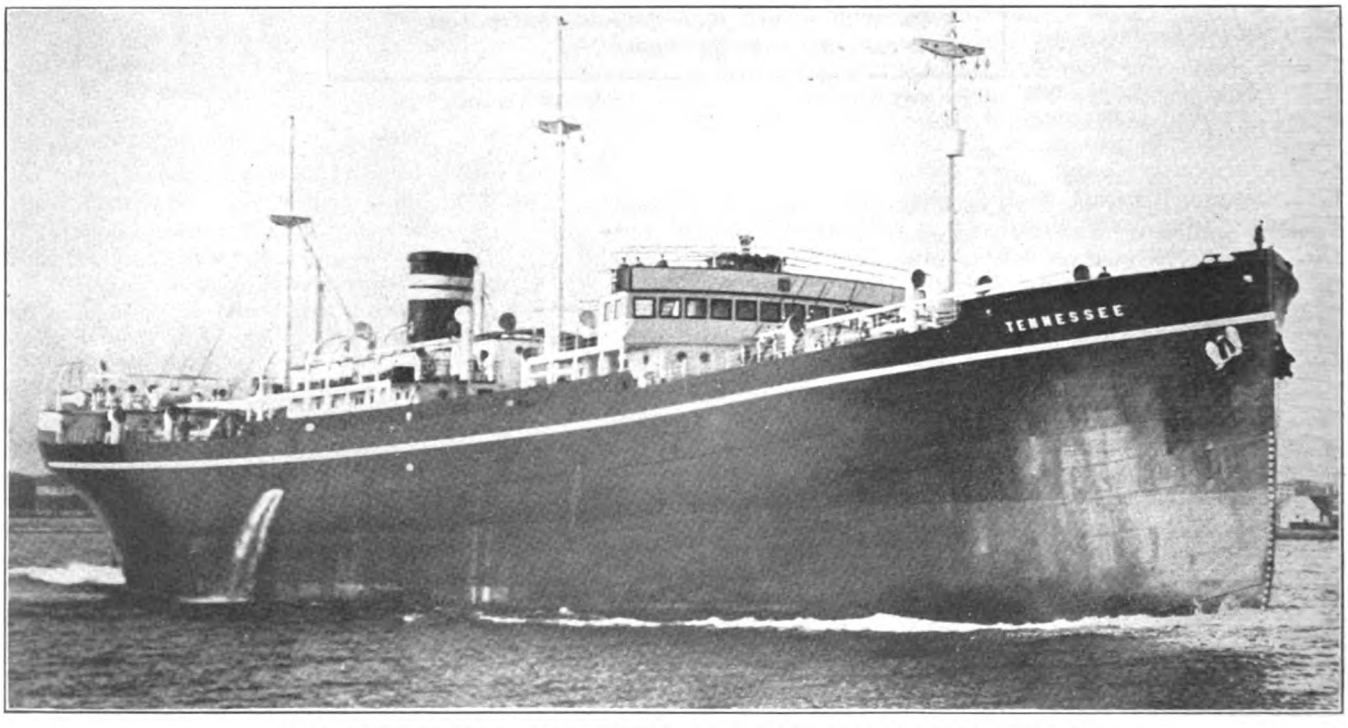


FIG. 1—DANISH BUILT MOTORSHIP FOR SERVICE IN AUSTRALIAN TRADE

Generated on 2024-08-28 00:16 GMT / https://hdl.handle.net/2027/mdp.39015043584120
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

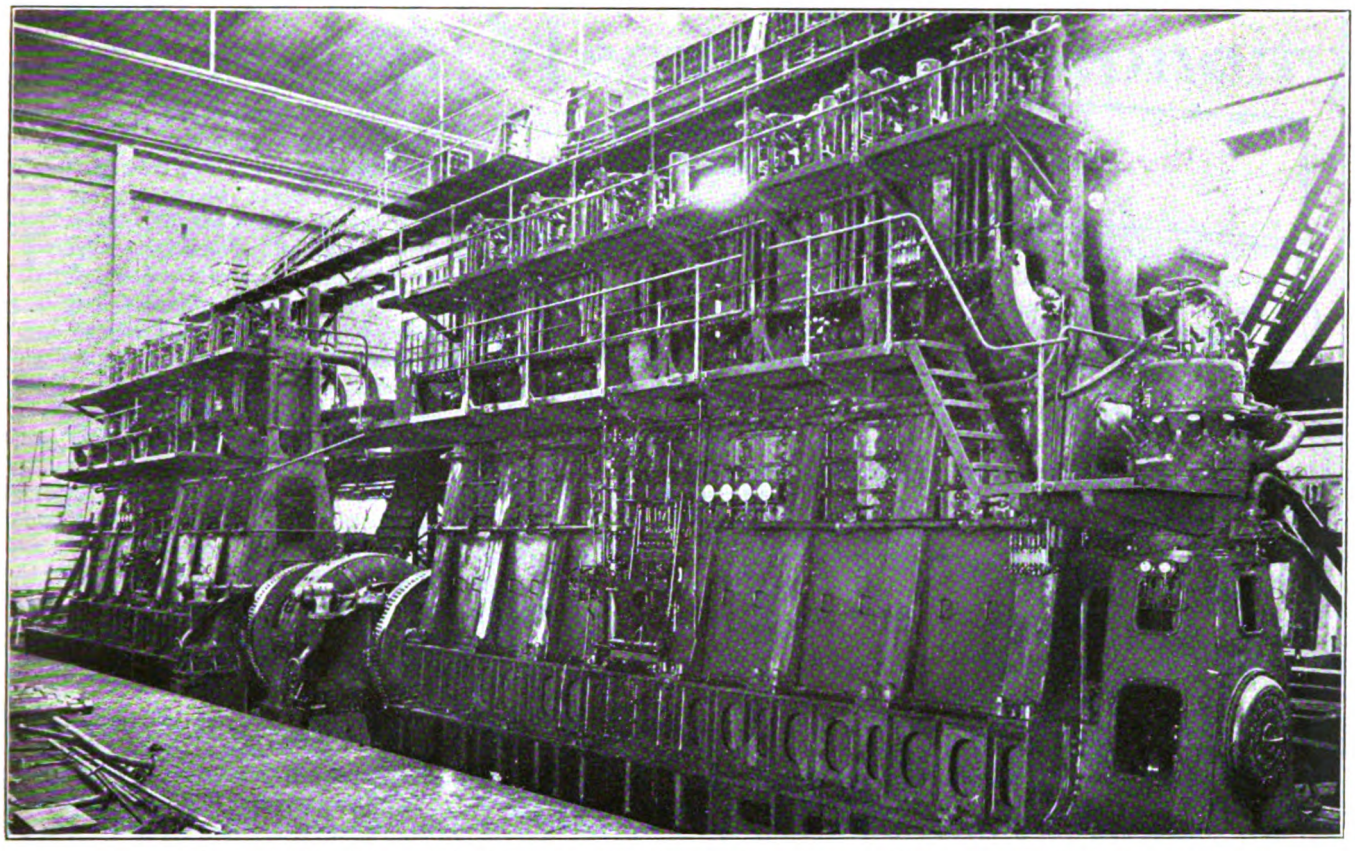


FIG. 2—FOUR-CYCLE, SIX-CYLINDER DIESEL ENGINES OF 3100 INDICATED HORSEPOWER

giving a good clear space for the stowage of cargo. The cargo hatches have a width of 18 feet and an average length of about 35 feet.

To facilitate rapid handling of the cargo, two steel tube cargo derricks capable of lifting three tons in single purchase and five tons in double purchase are fitted at each hatchway. In addition, two 2-ton derricks are fitted at No. 4 hatch. For manipulating heavy lifts, a 25-ton derrick is fitted on the foremast at No. 2 hatch and a 10-ton derrick on the mainmast at No. 3 hatch. All the cargo winches are electrically driven and are of Allmanna Svenska Elektriska Aktb. make. There are eight 3-ton winches, two 5-ton winches and two 2-ton winches for working the cargo derricks and also a heavy winch on the deck aft fitted with extended ends and large warping drums for warping purposes. The windlass is of Clarke, Chapman & Co.'s make, suitable for 2 5/16 inch diameter cables and is electrically driven. The steering gear is of the electro-hydraulic type and is controlled from the bridge by means of a telemotor. An emergency steering column is also fitted on the top of the deckhouse aft.

The saloon is arranged in the foremost deckhouse, and is tastefully fitted out in polished mahogany. There also are four 2-berth passenger cabins excellently fitted out to meet the requirements in the tropics and likewise a special suite of apartments for the owner's private use. The captain's accommodation, consisting of bedroom and sitting room in polished mahogany, is neatly and conveniently arranged in the deckhouse below the commanding bridge.

The accommodation for the officers and engineers is fitted in the midship deckhouse abreast of the motor casing in spacious well fitted out cabins. The crew are berthed aft, the sleeping accommodation being arranged below the awning deck in well lighted and well ventilated cabins, each for two men. The messrooms are arranged in the deckhouse above.

Particulars of Main Engine

A 1¼ kilowatt Marconi wireless telegraph station with accommodation for the wireless operator is fitted in the deckhouse on the boat deck.

The culinary arrangement is in accordance with the latest practice, refrigerated provision rooms, ice generators, etc., being provided. Electric light is installed throughout the ship. Fire extinguishing installation of a carbon dioxide type is fitted with pipe connection to all cargo holds.

The machinery is of Burmeister & Wain standard type for twin screw ships, the particulars of the main engines being as follows:

Two 4-cycle, 6-cylinder di sel motors.
Diameter of cylinders, m.m..... 630
Length of stroke, m.m. 960
Revolutions per minute 125
Indicated horsepower 3100
Brake horsepower 2400

The main engines are short stroke, forced lubricated crosshead type, with 3-stage compressors for supplying the necessary injection air for atomizing the fuel oil, fitted at the fore end of the engine.

All auxiliary machinery in the engine room as well as the deck machinery is electrically driven, the necessary current being supplied by three 60-kilowatt diesel dynamos. The voltage of the current is 220, and for lighting purposes it is transformed down to 110 volts by means of a motor generator.

Each of the generators is sufficient for supplying the necessary current under normal working conditions at sea, while two or all three have to be started when maneuvering with the maneuvering compressor running, or when loading or discharging cargo. A small cross tube boiler of about 100 square feet heating surface is fitted for supplying the necessary steam for the heating installation.

The trial trip brought the following results:

Mean draft on trial, ft., in.....9 8
Displacement on trial, tons 4415
Indicated horsepower, average 3540
Revolutions per minute, average .. 144
Mean speed on trial, knots 12.6

During the consumption trial, the main engines developed 3434 indicated horsepower at 137.7 revolutions per minute, on a fuel oil consumption of 135.54 grammes or 0.298 pounds per indicated

Generated on 2024-08-28 00:14 GMT / https://hdl.handle.net/2027/mdp.39015043584120
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

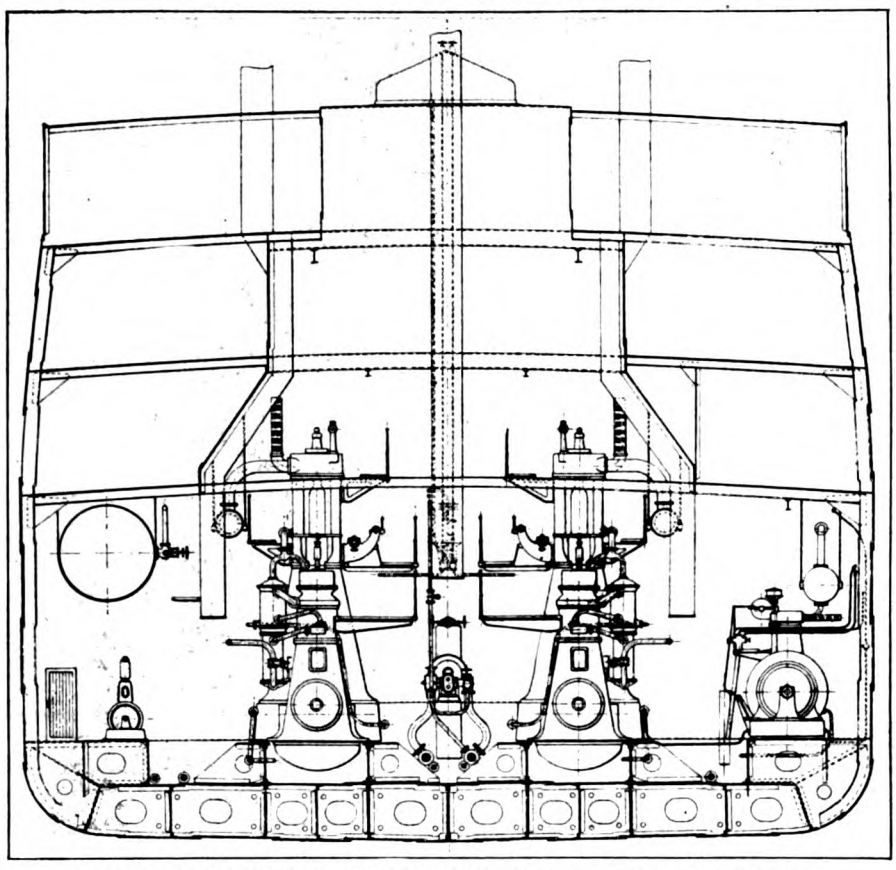


FIG. 3—SECTION THROUGH ENGINE ROOM OF BIG MOTORSHIP

horsepower, net calorific value being 10152 kilo calorific (18274 B.t.u.) including the consumption of auxiliary engines producing the necessary current for the auxiliary machinery, steering gear and electric light.

What the British are Doing

SIR OWEN PHILIPPS, chairman of the Royal Mail Steam Packet Co., and the Union Castle line, London, has been created a peer for political services to the British government and taken the title Baron Kyslant. In 1921, Lord Kyslant was president of the chamber of shipping of the United Kingdom and is at present head of the London chamber of commerce. The Royal Mail Steam Packet Co., with which the new peer has been intimately associated for many years, operates freight and passenger services between Great Britain and South America and in 1921 established a Southampton-New York service.

* * *

SIR ALFRED YARROW, chairman of Yarrow & Co. Ltd., shipbuilders and engineers, Glasgow, Scotland, has given £100,000 ($470,000) to the Royal Society of Great Britain to be used for the promotion of original scientific research especially along engineering lines. There are virtually no conditions associated with the gift. Sir Alfred is well known throughout the world as the inventor of the Yarrow watertube boiler which was one of the primary inventions underlying the development of modern high speed naval and merchant vessels. Sir Alfred who is now 82 years old, commenced his career as an engineer at the age of 16 when he was apprenticed to Ravenhill & Co., marine engineers. He founded the Yarrow works in 1866. The company has a plant in North America at Vancouver, B. C.

* * *

ON FEB. 16, Swan, Hunter, & Wigham Richardson Ltd., launched from their Neptune shipyard, Newcastle-on-Tyne, a finely modelled, steel, twin screw passenger steamer which they are building to the order of the British India Steam Navigation Co., Ltd., London.

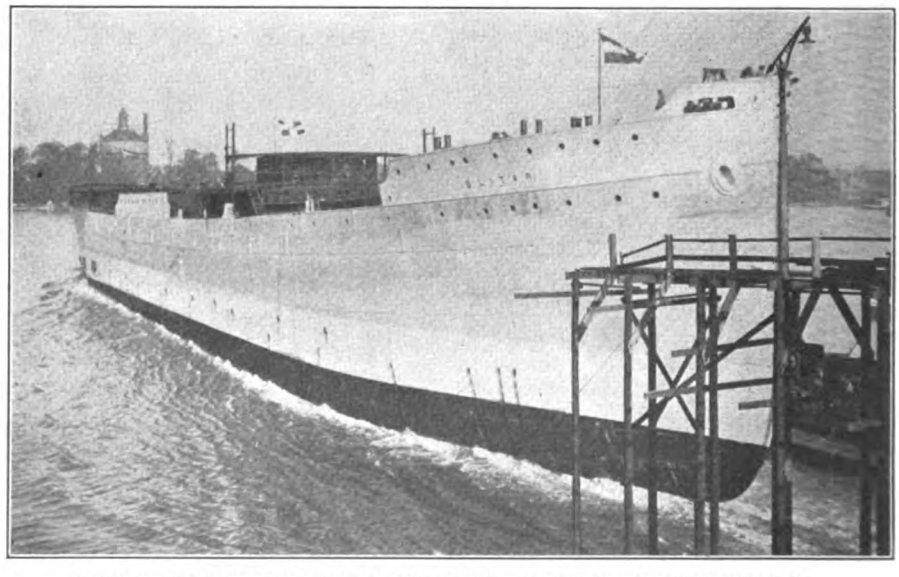
The vessel, named the KHANDALLA, is 440 feet in length by 55½ feet beam. She will be propelled by twin screw, 4-crank triple expansion steam engines balanced on the builders Yarrow, Schlick & Tweedy system and supplied with steam by eight large boilers working under Howden's system of forced draft, all of which are also being constructed by the builder at its Neptune engine works.

The steamer is intended for the owners' service in the East, and will have accommodation for 60 first class passengers, over 50 second class, as well as for a number of native passengers.

New Dutch Built Carrier

For service between Rotterdam and the Dutch Indies, the cargo steamer BLITAR is now under construction by the Fyenoord Shipbuilding & Engineering Co. for the Rotterdam Lloyd. The vessel is shown in the accompanying illustration leaving the ways of the shipbuilder at its Rotterdam yard. The BLITAR is 440 feet long between perpendiculars, 54 feet molded breadth and 36 feet 11½ inches depth from shelter deck. On a draft 27 feet 8⅜ inches, the displacement is 14,800 tons and the deadweight about 10,300 tons.

This steamer will be given accommodations for carrying Mecca pilgrims. She will carry complete electric light, wireless and refrigerating equipment. Power will be provided by a triple expansion engine developing 3750 indicated horsepower and driving the vessel at 12½ knots an hour.



NEW DUTCH BUILT CARGO STEAMER FOR EAST INDIAN SERVICE

Generated on 2024-08-28 00:26 GMT / https://hdl.handle.net/2027/mdp.39015043584120
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Superheat Means Fuel Economy

Study of Advantages in Reducing Operating Costs Held by Superheat with Record of Results Obtained

IN the ultimate analysis, two major considerations really govern the adoption of any method proposed for fuel economy on board ship—**first,** that economy actually results from the use of the method; **second,** that the initial and upkeep costs are such that a liberal return on the investment is possible. Before any method can even be considered, the shipowner, through his technical advisor must be shown that real economy will be obtained, and also the true limits of such economy. Further than this, it must be demonstrated that the practical application is entirely feasible, into which enter the question of first cost, effect of the installation on the existing plant, the cost of upkeep, probable length of life, any additions or changes necessary for the installation and not covered in the first cost, ease and simplicity of operation, and whether any increase in personnel is required.

That superheat applied to steam meets the first of the two conditions stated above has been recognized as a fact for many years. Records show that superheat was first applied in connection with marine boilers about 80 years ago. The unfortunate experiences encountered with these early installations, due principally to the rapid deterioration of the elements of the superheater and the deleterious effect on the valves and cylinders of the engine, with consequent excessive repair costs, have had their influence up to the present time in creating a condition of extreme caution on the part of engineers and shipowners in accepting the use of superheat. These difficulties have been overcome by applying the experience of the past, by making full use of the advance in the processes of manufacture of the materials necessary, by improving the design and methods of installation and by providing for proper lubrication.

Reducing Condensation

Thermal efficiency is increased by the use of superheat. Condensation is a direct and serious loss in all steam engines. This has been recognized by the care which is taken to minimize the radiation of heat by lagging boilers, steam pipes and cylinders with the best insulating material known. Saturated steam at a given pressure has a corresponding temperature. With the pressure constant, additional heat applied to the boiler will generate more steam but the temperature remains the same. Any cooling or useful work done during expansion of saturated steam means condensation of a part of the steam. The water so formed is not only useless as a working fluid, but in sufficient quantities and under certain conditions is an actual menace due to what is known as water hammer.

By adding heat to the steam in the initial stage when no longer in contact with the water in the boiler, its temperature may be raised above that due to its pressure and loss of heat through radiation may be experienced in proportion to the heat added without causing condensation. The steam consequently will remain as a pure dry simple gas and act accordingly in the cylinders. Actual serious loss results when the water of condensation from saturated steam is carried over in multiple expansion engines and amounts to between 20 to 25 per cent of the steam used, varying with the cut off and speed.

Forcing the Boiler

When a boiler is forced under conditions of saturated steam, the steam becomes wet and the quantity of water carried over is increased with a resulting lower economy. On the other hand, forcing a boiler using superheat will give a higher degree of superheat. Water in the cylinders will in itself tend to absorb some of the heat of the incoming steam and so reduce the temperatures of the cylinder walls. A dry gas, such as superheated steam, is not a good conductor of heat and there is consequently less heat transfer between it and the cylinders with correspondingly less condensation. By eliminating the water in the cylinders, the danger of water hammer and leaky joints will be avoided. Furthermore, less loss of effective heat will occur in steam passing through long lines of pipe.

In triple expansion engines with a steam temperature of 580 to 620 degrees Fahr., an economy of 15 per cent in coal consumption over that possible with saturated steam may be expected. The percentages of saving for quadruple expansion may be somewhat less, while the saving in the case of compound engines is greater.

In the turbine, the saving possible by the use of superheat is correspondingly great, though for different reasons. The increase in thermodynamic efficiency is small but a distinct gain in steam economy results from the elimination of water held in suspension by the steam and the corresponding reduction in friction. The economy in steam consumption may be stated as lying between 7 and 16 per cent. with a range of superheat from 100 to 300 degrees.

In a turbine, water will form under saturated steam conditions, due to expansion of the steam while doing work, and increase gradually from point of admission to point of exhaust. The fluid friction set up under these conditions must be overcome by the use of a correspondingly greater amount of steam. The losses due to water in suspension, using saturated steam in turbines, are consequently serious and amount to from 16 to 20 per cent. But further than this, moisture will cause erosion of blading due to the high velocity at which the water particles in suspension impinge upon the edges of the blading. There is also the danger of damage to the blading due to the separation of the water, causing stripping of blades. Consequently for both reciprocating engines and turbines, distinct advantages accrue in the use of superheated steam at high temperatures. In ships where conditions have necessitated the forcing of the boilers, superheaters may even show a greater effectiveness as their installation will be equivalent to increasing the size of boiler.

Initial and Upkeep Costs

It is generally admitted, and it can not be denied, from a thermal point of view, that superheat will effect direct and important economy in steam consumption and consequently a saving in fuel. The next important consideration above stated for the adoption of any method to increase economy, that is, that the initial and upkeep costs should be of such as to allow a liberal return on the investment, is naturally a matter of much greater difference of opinion among engineers and shipowners.

The principal reason for this goes back to the early installation of superheaters on board ships. Without question, great trouble was experienced in deterioration of the superheater ele-

Generated on 2024-08-28 00:14 GMT / https://hdl.handle.net/2027/mdp.39015043584120
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

ments due to lack of experience and the fact that the necessary quality of materials did not exist. Such elements have been developed to a high degree in quality and in resistance to corrosion. Experience in the use of highly superheated steam has also demonstrated that it is necessary to use steel steam pipes and steel valves.

Also, another early difficulty, that of lubrication, has now been overcome. With saturated steam the moisture, in the steam forms with the swabbing of the piston rods, all necessary lubrication, whereas with superheated steam internal lubrication is absolutely essential. A compounded mineral oil that does not carbonize at below 650 degrees Fahr. forced into the cylinders will obviate any trouble due to lack of lubrication on account of the dryness of the steam. A liberal quantity should be used at first and later reduced as conditions warrant. A pint per 1000 horsepower for 24 hours will be sufficient to secure an efficient oil film between the working surfaces of the pistons and piston valves and cylinder walls.

Superheated Steam vs. Saturated Steam

Complete Data Taken From Logs of 10 Ships With Superheat and 10 Ships Without Superheat, Operated for a Period of Two Years by the Same Company

	With superheat	Without superheat	With and without superheat
Gross tonnage, average	6,027	5,537	...
Net tonnage, average	3,706	3,471	...
Mean working displacement, average	11,116.5	9,846.7	...
Designed speed, average	10.2	10.43	...
Mean speed, average	10.03	10.06	...
Mileage	855,345	962,106	...
Designed, indicated horsepower, average	2,240	2,228.1	...
Coal consumption with port, total	149,072	198,124	...
Coal consumption without port, total	133,920	180,731	...
Coal per day propeller, average	37.2	45.51	...
Coal per day port, average	4.786	5.595	...
Coal per 100 miles with port use	17.43	20.59	...
Coal per 100 miles without port use	15.66	18.79	...
Coal (pounds) per displacement ton per 100 miles—10 ships, two years' operations	3.155	4.274	...
Coal (pounds) per displacement ton per 100 miles—89 ships, two years' operations	.....	5.73	...
Coal (pounds) per displacement ton per 100 miles—99 ships, two years' operations, average	.....	.....	5.58
Ratio mean speed to designed speed	98.33%	96.45%	...
Gain, actual speed to designed speed	1.88%	.....	...

Summary	Superheat	Nonsuperheat	
Mileage, 10 ships, two years	855,345	962,106	...
Fuel consumption in tons	133,920	180,731	...
Coal 100 miles without port, tons	15.66	18.79	...
Estimated coal consumption based on mileage of 855,345, tons	133,920	161,044	...
Estimated saving in tons coal	27,124	.....	...
Estimated saving $10 per ton	$271,240	.....	...

Extent of Saving

The installation of superheaters of the present day type, counting the first cost and the necessary depreciation, will unquestionably show a large return on the investment. It is claimed by one company of standing with numerous marine installations to their credit, the Superheater Co., 17 East Forty-second street, New York, that in the case of a 7000-ton deadweight cargo vessel with 2000 indicated horsepower triple expansion engine, allowing for a 15 per cent carrying charge, that a 100 per cent return on the investment can be made each year. This particular instance was a conversion job and a 20 per cent increase in capital outlay over that required when the superheaters are furnished and installed in new construction, was allowed for. In arriving at these figures, no account was taken of any additional cargo which might be carried due to a reduction of bunker fuel which, under certain circumstances would mean additional revenue.

Superheat may be applied in any marine plant, either with natural or forced draft, with coal or oil for fuel, with reciprocating engines or turbines of impulse or reaction type with or without reduction gears.

The superheater has had greater vogue abroad, in Great Britain and Germany, than in the United States. Individual conditions on different ships, of course, must be taken into account before deciding on the benefits to be derived from superheat. Under ordinary conditions, a vessel with reciprocating steam engine running with saturated steam is handicapped by a 15 per cent greater fuel consumption than that of a similar ship using superheat. Through the courtesy of the Superheater Co. and the Nippon Yusen Kaisha, an account is given below of actual fuel consumption for 20 ships of this line, 10 with and 10 without superheat, over a period of two years. The exact records have been taken from the engineer's logs as compiled by this steamship line. The tabulated figures are shown in the accompanying table.

"The naval engineers of Japan are well aware of the economy derived from superheating their vessels. The Nippon Yusen Kaisha, operating between the Far East and the western coast of the United States, operate 103 ships, of which 10 have been equipped with high degree fire tube superheaters built in Japan.

"A careful record has been kept on the operation of the 10 superheated ships, together with the operation of 10 saturated steam ships operating over the same trade route. As the ships are almost identical in design, the attached resume of their comparative operation is of particular interest.

"The average gross tonnage of the superheated ships amounts to 6027 tons as against 5537 tons for the saturated vessels. The mean working displacement of the superheated ships is 11,116 tons, compared to 9846.7 saturated, or a gain of 1270 tons. The designed speed is 10.2 superheated against 10.43 saturated, whereas the actual speed in service superheated is 10.03 against 10.06 saturated or 1.88 per cent better showing in the actual over designed speed for the superheated ship. The actual mileage of the 10 ships operating with superheated steam in two years of operation was 855,345 miles, compared to 962,106 miles for the saturated vessels. The total coal consumption at sea for the superheated ships was 133,920 tons compared with 180,731 tons for the saturated ships.

Summary of 2-Year Test

"Summarizing results in the table, the mean working displacement of the superheated ships exceeeded the saturated ships by 1270 tons. The average coal consumption per 100 miles at sea for the superheated ships was 15.37 tons compared to 18.44 tons for the saturated ships. The actual fuel consumption of the 10 superheated ships for the mileage of 855,345 amounted to 133,920 tons, compared to 161,044 tons for the 10 saturated ships for the same mileage. Based on the same mileage, the saving in tons of coal for the two years totalled 27,124 tons or 1356 tons saved per ship per year. With fuel at $10.00 a ton, this will amount to $13,560 or sufficient to more than pay for the superheaters in one year. The value of the greater tonnage averaging approximately 1300 tons per ship per year amounts to considerably more than the actual saving in fuel. In normal times the value of a ton of cargo space amounts to $200 per ton per year. It should be noted that the displacement of each superheated ship was approximately 1300 more tons than the saturated ship, which means that even with the economy of coal, the engines were able to propel this greater tonnage.

Generated on 2024-08-28 00:26 GMT / https://hdl.handle.net/2027/mdp.39015043584120
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Sink or Sell the Ships

(*Continued from Page* 123)

prices is ridiculous and criminal. The main job is to remove the board and its blighting effects from the field.

The scrapping of the useless ships would automatically increase the value of the rest. First auction the poorer ships, and if no bids are received, scrap or sink them. A few such decisive steps would add value to each remaining ship. The windup of such a campaign would find buyers in plenty. Even Chairman Lasker sees the wisdom of such a program as he testified that "3,000,000 poor tons must be done away with. This potential surplus * * * depresses the price of all of our tonnage and so it will come to pass that we shall liquidate the whole for less than we could liquidate the good part."

Congress talked the subsidy bill to death and everyone felt revulsion at the unfair tactics of the filibuster. But the shipping board continues its effective plan of talking American shipping to death, one thing today and another tomorrow.

Sink or sell the ships is the one solution and the one means of bringing maritime independence to this country. Month after month, the board

Ocean Freight Rates

Per 100 Pounds Unless Otherwise Stated

Quotations Corrected to March 12, 1923, on Future Loadings

New York to	Grain	Provisions	Cotton (H. D.)	Flour	General cargo cu. ft.	General cargo 100 lbs.	††Finished steel
Liverpool	1s-9d	$0.35	$0.20	$0.14	$0.30	$0.60	$7.00T
London	1s-6d—1s-9d	0.35	0.20	0.14	0.30	0.60	7.00T
Christiania	$0.20	0.35 to 0.40	0.47½	0.23 to 0.25	0.37½	0.80	7.00T
Copenhagen	0.18	0.35 to 0.40	0.47½	0.23 to 0.25	0.42½	0.85	7.00T
Hamburg	0.11	0.20	0.25	0.16	0.37½	0.75	7.00T
Bremen	0.11	0.20	0.25	0.16	0.37½	0.75	7.00T
Rotterdam	0.12	0.20	0.25	0.15	0.35	0.70	7.00T
Antwerp	0.10	0.27½	0.20	0.18	0.35	0.70	6.50T
Havre	0.11	0.40	0.22½	0.20	0.40	0.75	8.00T
Bordeaux	0.11	0.40	0.22½	0.20	0.40	0.75	8.00T
Barcelona	0.18	0.55	0.50	7.00T	—16.00T—		7.00T
Lisbon	0.20	0.75	0.50	7.00T	—20.00T—		7.00T
Marseilles	0.17½	0.55	0.50	5.60T	—20.00T—		5.00T
Genoa	0.17	0.60	0.35	0.30	0.40	0.80	8.00T
Naples	0.17	0.60	0.35	0.30	0.40	0.80	8.00T
Constantinople	0.21	15.00T	0.75	0.30	—20.00T—		8.00T
Alexandria	0.18 to 0.21	15.00T	0.75	0.30	—20.00T—		8.00T
Algiers	0.20	0.75	0.75	0.30	—20.00T—		10.00T
Dakar	.....	14.50T	.....	15.00T	—20.00T—		10.00T
Capetown	10.50T	17.00T	17.00T	12.50T	—17.00T—		12.50T
Buenos Aires	.....	20.00T	.....	.....	—20.00T—†		6.00T†
Rio de Janeiro	.....	21.00T	.....	.....	—21.00T—†		6.00T†
Pernambuco	.....	22.00T	.....	.....	—22.00T—†		8.00T†
Havana	0.17½*	0.37½*	.....	0.17½*	0.47*	0.94*	0.20*
Vera Cruz	.....	0.30	.....	0.20	0.49	0.90	0.30
Valparaiso	.....	1.07	.....	0.70	0.45	0.80	12.00T
San Francisco	.....	0.40	.....	0.56	.....	.....	0.30
Sydney	.....	18.00T	.....	.....	18.00-24.00		9.00-12.00T
Calcutta	.....	16.00T	.....	10.00T	—16.00T—		10.00T

T—Ton. †Landed. ††Heavy products limited in length. *Extra charge for wharfage.

From North Pacific Ports to	Lumber Per m. ft.
San Francisco	$6.50 to 7.50
South California	7.50 to 8.50
Hawaiian Islands	10.00 to 10.50
New Zealand	14.00 to 16.00
Sydney	14.00 to 16.00
Melbourne-Adelaide	14.00 to 16.00
Oriental Ports	10.00 to 12.00
Peru-Chile	14.00 to 16.00
South Africa	19.00 to 20.00
Cuba	17.00 to 18.00
United Kingdom	80s to 90s
United Kingdom (ties)	70s to 80s
Baltimore-Boston range	$13.50 to 15.00
Baltimore-Boston range (ties)	13.00 to 14.00
Buenos Aires	14.00
Flour and Wheat	
Oriental Ports	$ 5.00
U. K. and Continent	32/6 to 37/6T
Scandinavia	37/6 to 42/6T
Mediterranean	37/6 to 42/6T
West Coast Italy	35s to 40sT
Steel	
Oriental Ports	$5.00T to 7.00T
Cotton	
Oriental Ports	35c to 50c pe rcwt.
Apples	
United Kingdom	90 cents per box
Copper	
Oriental Ports	$5.00
Box Shooks	
Oriental Ports	$10 measurement ton
Metal Junk	
Oriental Ports	$10.00
Scrap Copper	
Oriental Ports	$5.00
Salt Herring	
Oriental Ports	$8 measurement ton
Machinery	
Oriental ports	$7.00
Automobiles	
Oriental ports	$8.00
General Merchandise	
Oriental ports	$9.00

Principal Rates To and From United Kingdom

	s	d
Grain, River Plate to United Kingdom	21	3
Coal, South Wales to Near East	13	6
Coal, United Kingdom to United States	12	0
Pig Iron, United Kingdom to United States	14	0
Coal, South Wales to Buenos Aires	18	0
Iron ore, Bilbao to Middlesbrough	7	7
General British market, six months time charters, per ton per month	4	0

Bunker Prices

At New York

	Coal alongside per ton	Fuel oil alongside per barrel	Diesel oil alongside per gallon
Jan. 9, 1922	$5.50 @ 5.90	$1.25	5.50 cents
April 6	5.30 @ 5.90	1.16½	4.75 cents
July 1	8.10	1.26½	4.75 cents
Oct. 13	8.55	1.45	5.50 cents
Jan. 11, 1923	7.90	1.50	4.75 cents
Feb. 10	7.50	1.66½	4.65@5.40c
March 12	7.00@7.70	1.66½	5.15@5.75c

At Philadelphia

	Coal alongside per ton	Fuel oil alongside per barrel	Diesel oil alongside per gallon
Jan. 9, 1922	$5.10 @ 5.35	$1.50	5.00 cents
April 10	5.90 @ 6.25	1.05	4.25 cents
July 1	8.00	1.15	4.25 cents
Oct. 13	8.30	1.47	5.00 cents
Jan. 9, 1923	7.30 @ 8.00	1.57½	5.00 cents
Feb. 10	6.65	1.66½	5.00@5.65c
March 10	6.15 @ 7.10	1.66½	5.10@5.65c

Other Ports

Boston coal, per ton	$10.16
Boston, oil, f. a. s., per barrel	$1.58
Hampton Roads, coal, per ton t.i.b.	7.55 @ 7.85
Seattle, coal, per ton	7.50 to 8.50
Cardiff, coal, per ton	20s
London, coal per ton	24s
Antwerp, coal, per ton	25s

Generated on 2024-08-28 00:14 GMT / https://hdl.handle.net/2027/mdp.39015043584120
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

rolls up millions in losses and by its mere existence levies a destructive toll on American shipping.

Sound economics, good business and national protection call for the disappearance of this outrageously expensive experiment in federal interference.

If the ships are useless why spend more money on them? If the board is useless why spend more funds to keep it alive? Sink the poor ships—sell the good ones for any price offered and stop this vicious evil of spending millions of public funds under the pretense of liquidating an acknowledged bankrupt. Let us be sensible and shut up shop.

Lays Power Cable Across San Francisco Bay

BY DON PARTRIDGE

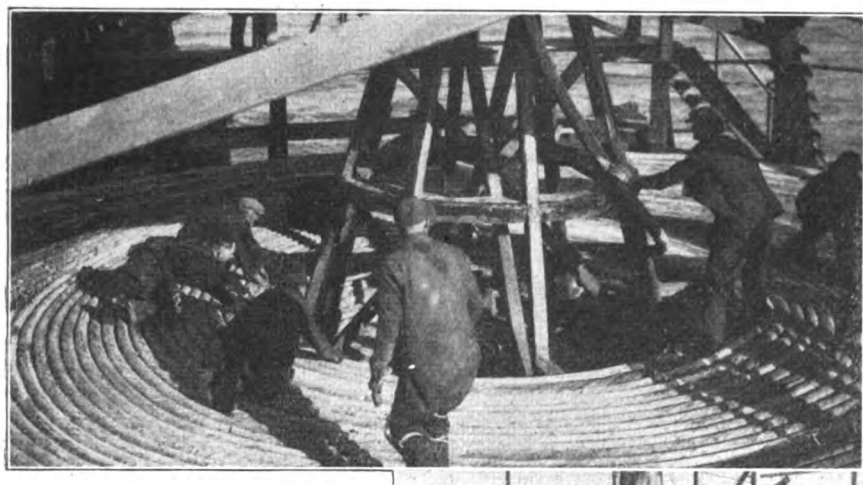
BY LAYING across San Francisco bay its fourth and what is claimed to be the world's largest and longest submarine cable for the transmission of electrical energy, the Great Western Power Co., of California, recently connected up the final link between the 200-mile transmission line of its Caribou power plant in Plumas county and its Mason street substation in San Francisco. This cable, part of which is shown in the accompanying illustration, coiled on the deck of the barge, was laid in the remarkably short time of 2 hours and 37 minutes.

The cable, which is about 5 inches in diameter and weighs approximately 500 tons, or more than 20 pounds per foot, is designed to carry 11,000 volts, 3 phase, totalling over 15,000 horsepower. An armor of heavy steel wire protects the cable which is made up of three well insulated stranded conductors. In addition, several sets of telephone cables are located inside. Nine gondolas were required to transport the cable from the Worcester, Mass., plant of the American Steel & Wire Co., where the cable was made, to San Francisco where it arrived on Dec. 15. Under the supervision of A. O. Hoeftmann, cable engineer for the American Steel & Wire Co.; Mr. Madison superintendent of the same company; W. G. B. Euler and John Knootz, general superintendent and chief engineer, respectively, of the Great Western Power Co., plans were made for the splicing and laying.

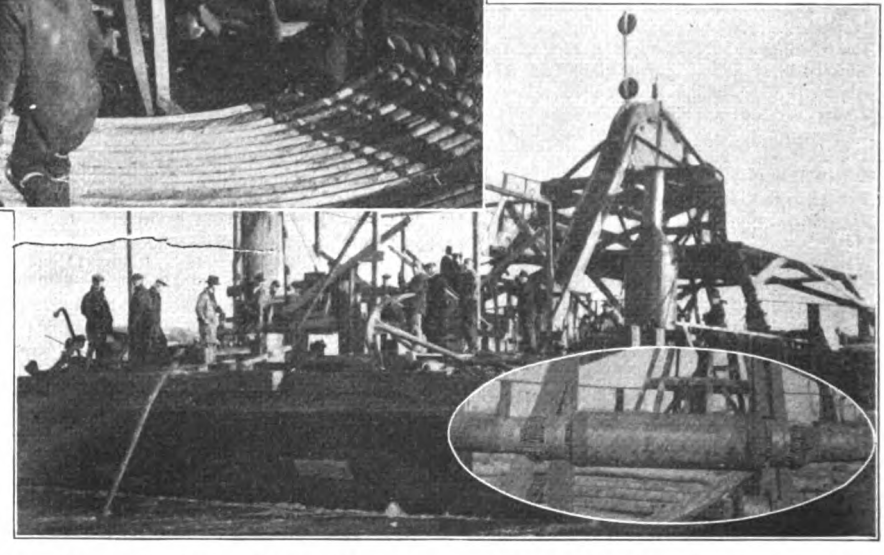
Seven individual splices were made, each splice requiring 12 hours to complete. One of the finished splices is shown in the insert in the accompanying illustration. The cable as one unit was then placed about the laying barge upon which a special rigging for paying off had been erected, as shown in the illustration. During the actual laying, the barge was propelled by three tugs, one in front and one on either side. The course was from Pier 41 at the foot of Mason street, San Francisco, to the Richmond shore line in Contra Costa county.

Including supervision and laying, the total cost of the cable was over $250,000, but saved the Great Western Power Co. several times this amount in eliminating the previous type of overhead construction around San Francisco bay. At the completion, the cable was subjected to a test of 35,000 volts, or three times the normal voltage it had been designed to carry, without any indication of trouble. The original cable of the company was installed in 1912 and is of about half the length and carrying capacity of the one just laid.

The laying of the second and third cables followed closely the laying of the first at intervals of two years. These four cables now supply San Francisco with hydroelectric capacity exceeding 50,000 horsepower.



The cable was coiled about a special rigging erected on the deck of the barge and was payed out by allowing the coils to rise upward and over the top of the rigging. The cable is 5 inches in diameter



This view shows the cable being payed out over the stern by means of the rigging. The inset shows one of the seven splices which were made

Generated on 2024-08-28 00:24 GMT / https://hdl.handle.net/2027/mdp.39015043584120
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Reports Show Losses and Gains

Annual Statements of Marine Insurance Companies Reveal Many Found Year Unprofitable—Others Show Good Profits

THE year just passed has been highly unprofitable for a large number of insurance companies writing marine business, reports of their transactions, filed with the various insurance departments show. Many companies have experienced a marked decrease in premiums over the preceding 12-month period while losses were heavy. A few companies managed to weather the storm by adopting conservative underwriting methods and were able to report a satisfactory profit; others have only good luck to thank for their comparatively light loss ratio.

Included in the 67 companies that have so far made public their 1922 underwriting experience, 17 show losses in excess of premiums received without allowing for commissions or underwriting expenses. Many companies that were successful in keeping their losses below their premium income nevertheless lost money in their marine transactions when expenses are added to the debit side of their ledgers.

Among the companies that report actual losses paid in excess of premiums received are the following: Aetna, premiums $421,000, losses $853,154; American Equitable, premiums $5,556, losses $121,354; American Eagle, premiums $38,948, losses $69,000; Baltica, premiums $16,418, losses $130,430; Globe & Rutgers, premiums $1,869,991, losses $2,055,143; Great American, premiums, $502,032, losses $513,922; Hanover, premiums $124,561, losses $130,560; New Hampshire, premiums $56,115, losses $92,213; New Jersey, premiums $10,811, losses $98,787; Old Colony, premiums $117,107, losses $142,560; Providence-Washington, premiums, $744,142, losses $686,590; Rossia, premiums $213,786, losses $301,200; Western Assurance, premiums $226,850, losses $241,865; Yangtse, premiums $202,360, losses $272,860; North China, premiums $120,850, losses $122,900.

Of the companies that had such an unfavorable experience several withdrew from the marine insurance field altogether, these including the American Equitable, Baltica, and Rossia. In several instances the losses have been increased by unpaid losses incurred in 1921 and settled in 1922. The Providence-Washington was reinsured by the United States Lloyds early this year. The largest volume of business transacted by a single company in 1922 was $3,180,791 in premiums by the Atlantic Mutual which incurred losses of only $1,234,909. Other companies that managed to make an excellent showing last year are the Agricultural, premiums $231,378, losses $144,860; Automobile Insurance, premiums $2,106,210, losses $1,661,356; Continental, premiums $401,780, losses $325,400; Hartford, premiums $696,439, losses $222,283; Home Insurance premiums $1,064,190, losses $764,570; Niagara, premiums $625,790, losses $458,210; St. Paul Fire & Marine, premiums $845,539, losses $706,720; Springfield Fire & Marine, premiums $636,376, losses $375,380; United States Fire, premiums $500,000, losses $322,370; American & Foreign, premiums $321,275, losses $93,200; British & Foreign, premiums $875,270, losses $35,440; Union Marine, premiums $130,471, losses $69,390; Sea, premiums $882,437, losses $415,180.

Commenting on marine underwriting during the past year, a leading insurance man declared that in his opinion the market has been steadied and underwriters are generally in a better position to see ahead than they have been for several years. According to this same authority, an insurance company can carry on a profitable marine business so long as it is conservative and does not rush into the trap when a cry is raised that somebody has cut rates and, therefore, everybody else must do likewise to keep up the premium income. Marine business has been highly profitable for some companies due in most instances to careful selection and sound underwriting. As was predicted last year, when several companies announced their intention to get business regardless of cost, these companies are bewailing their lot when annual statement time comes around.

Until all the companies have conformed with the law and have filed reports showing the year's transactions it is not possible to compare the total gain or loss in marine insurance with previous years. In 1922, the pendulum seems to have taken a bigger swing than usual so that while some insurance companies are congratulating themselves on their very excellent showing, others have suffered losses that seem to counterbalance the gain.

New Ship Board Agency Starts in Business

THE new United States Protective and Indemnity Agency has started operations and has appointed agents in more than one hundred ports. These agents, it is understood, have been vested with the authority to settle claims of less than $1000, all larger claims to be taken up with the main organization. Executives of the Agency have been elected as follows: Nathan A. Smyth, president; Capt. F. E. Ferris, formerly shipping board commissioner in London, in charge of foreign activities; Capt. I. L. Evans, director of the sea service bureau and an admiralty law expert in charge of the work in this country; John Nichol, formerly of the Old Dominion line, head of the cargo department; Oliver C. Garvin, formerly of the claims department of the Barber line in charge of personal injury department, and F. D. Yott, former legal advisor of the American Red Cross in Europe, legal advisor for the foreign department.

* * *

Try To Improve Barge Canal Conditions

UNLESS an improvement is made in operating conditions along the New York state canals, many marine insurance companies probably will give up writing this business entirely. The year just passed, like the preceding one, was disastrous. An estimate of the losses on hulls and cargoes in the New York state barge canal in 1922 is given by a competent authority as $700,000 while premiums were in the neighborhood of $200,000. The largest proportion of losses were experienced in the vicinity of Oneida lake.

Underwriters and transportation men themselves are expected to co-operate with a view to improving the situation as both are mutually affected. The underwriters are taking the stand that conditions must be so improved that they will be able to quote satisfactory rates on canal business while shippers will not continue to use the canals unless a more favorable insurance rate is given them. New York state authorities, it appears, are eager to co-operate with both the insurance men and the shippers. A committee com-

Generated on 2024-08-28 00:15 GMT / https://hdl.handle.net/2027/mdp.39015043584120
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

posed of three underwriters and three shipping men has prepared a set of recommendations which they will submit to the superintendent of public works. The insurance men on the committee are H. W. Beebe, chairman, E. E. Lethbridge and G. C. Owens. G. R. Hall, S. MacClinkan and S. W. Bullock represent the shipping interests. The recommendations provide for a new breakwater at the entrance of Oneida lake, the buoying of the north and middle channels of the lake and the installation of a system of storm signals at each end of the lake.

* * *

Decides When Insured Can Recover Premiums

AN insured is entitled to a return of the premium paid, there being no fraud on his part where the policy was not delivered, or if it was made to cover a future contingency which never did occur or where the policy is void for illegality or where the insured, induced to take out his policy under false representations on the insurer's part, has rescinded, according to a decision anent the recovery of premiums made by the New York supreme court, appellate division, fourth department, in an action brought by the O'Conner Transportation Co. against the Glens Falls Insurance Co.

The insured can not recover premiums, it was further decided, paid for insurance policies that expired prior to any loss occurring, though a loss occurred while a subsequent similar policy was in force and the company successfully resisted liability because it can not be said that the prior policies were absolutely void and created no liability, in view of the insurer waiving the defense of breach of warranty or preferring to compromise.

* * *

Germans Extend Cover Period at River Plate

UNDER pressure exerted by Argentine bankers and brokers for an extension of the cover period on River Plate shipments in customs houses and warehouses, Hamburg marine underwriters have acquiesced to their wishes and have adopted the following clause:

"For goods destined to Buenos Aires or Montevideo, the risks under this policy shall cease upon arrival at the customs house and warehouse shed or store. If goods are not directly brought to the customs house, the risk shall cease upon the expiration of 10 days subsequent to landing.

"If the risks after the expiration of such period are to be covered, a premium of ⅛ per cent for each commenced 15 days is payable." American underwriters have been firm in refusing to extend the cover period on River Plate shipments beyond the 10 days.

* * *

Ruhr Occupation Revives War Risk Clauses

ALARM lest the French authorities seize shipments moving in and out of German ports as reparation has diminished and underwriters have been advised that the war rate on shipments to and from Germany has been sliced in half. The situation both in Europe and the Near East has been watched closely by underwriters and with the seizure of the Ruhr by the French authorities it was feared that shipping might be interrupted. Much of the danger is thought to have passed and instead of ranging from ¼ to ¾ per cent on cargo shipments, the war rate is now as low as ⅛ per cent.

The peril anticipated has been a somewhat complicated one as ordinary war clauses are not applicable to the present situation, no war actually existing between France and Germany. There are no precedents to guide the underwriters and they are consequently obliged to rewrite their clauses so that they will apply to cover warlike hazards which technically are not war hazards. So far no loss has been occasioned through the action of the French authorities. If, however, there should be a single loss, it is predicted in underwriting circles that the rate would be jumped at least 100 per cent. Comparatively little war risk insurance is being asked or written.

* * *

Big Pacific Gale Piles Up Heavy Losses

A SEVERE gale in the northwest Pacific recently caused insurance companies an underwriting loss said to be in the neighborhod of $3,000,000, the loss falling for the most part on Pacific coast underwriters. Advices from San Francisco received by marine underwriters in New York indicate that at least five vessels became a total loss in one of the most disastrous storms in the annals of marine underwriting in the United States. The ships lost include the NIKA, valued at $150,000, cargo $60,000; the TUSCAN PRINCE, $1,500,000, cargo $750,000; the SANTA RITA, value $250,000; the COOLCHA, value $150,000 and an unidentified 3-mast schooner. The estimate of $3,000,000 loss is conservative.

Rules on Liability for Loss from Sea Water

A DECISION of interest to shippers has been handed down by District Judge Augustus N. Hand in the United States court for the southern district of New York in the case of Arbib & Houlberg Inc., against the Second Russian Insurance Co. The decision was to the effect that marine underwriters are not liable for goods damaged by sea water unless it can be proved that such damage was due directly to a peril of the sea. The judge held that a recovery could not be made as there was no proof that the cargo had been damaged by water that had entered during a storm.

Trade Outlook at Boston Best in Months

Incoming freight at the port of Boston has been unusually heavy during the past month. One of the principal shipping interests reports the heaviest inbound freight from South America in the history of the port, and nearly all lines report an improvement in imports and a slight falling off in exports. Arrivals of Egyptian cotton and other material from the Mediterranean have been far in excess of freight offering for the return trip so that vessels which have unloaded at Boston have had to put in at other ports before returning.

The present outlook for general traffic through Boston is decidedly favorable, and according to one of the best authorities conditions are more encouraging than they have been at any time since the first of 1922. The serious freight blockade at Boston docks of a month ago has been materially relieved, and while a large amount of material still awaits cars for its distribution, this is not sufficient to turn incoming vessels to other ports.

Some shipping interests feel that the port received a slight setback when the Boston & Maine railroad issued a new tariff cutting down the free time allowed importers' goods on dock before moving. The new schedule cuts the free period from 14 days to 6 days after discharge of cargo. Storage rates beginning after the 6 days of free time are increased to 6.25 mills per 100 pounds per day. This new tariff places all of the railroads and all of the docks at Boston on a parity in the question of free time and storage charges.

The Morgan line has extended its service to New England ports and the steamer EL LAGO is now plying between Boston and New Orleans.

Generated on 2024-08-28 00:16 GMT / https://hdl.handle.net/2027/mdp.39015043584120
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

A. B. Cauty Is New Leader in Ship Association

A. B. Cauty, joint manager of the White Star line, who was recently elected vice chairman of the Liverpool Steamship Owners' association, has been in the steamship business for more than 30 years. He was born in Liverpool in 1870, being the son of Dr. Henry Cauty. He was educated at Cambridge House school, Seaforth, and commenced his maritime career as an apprentice with Richardson Spence & Co., managing agents in Liverpool for the Inman line. Later, Mr. Cauty joined the American line and in 1899 was appointed to a position in the White Star line with which he has been associated since. He was made joint manager and Liverpool director of the White Star line in 1913.

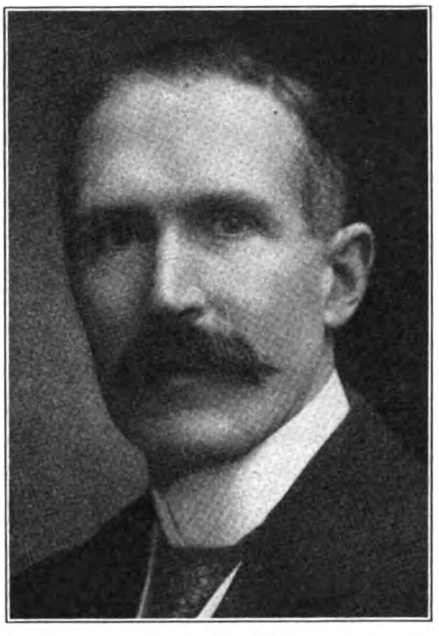
Will Expand Pacific Terminal Company

Capt. John Barneson, founder and president of the Associated Terminals of San Francisco, has resigned and is succeeded as president by his son, J. Leslie Barneson. Captain Barneson continues as a director. Harry S. Scott, president of the Transoceanic company and of the General Steamship Corp., and formerly secretary of the Associated Terminals, was elected vice president and general manager of the terminals. H. E. Chambers, son of Edward Chambers, vice president of the Santa Fe railroad, was elected secretary. Capt. William Schirmer, president of the Schirmer Stevedoring Co., was made a director, and Nathan H. Frank, attorney, was re-elected as a director. Mr. Scott announced that the policy of the Associated Terminals will be changed, and that, in the future, the company will be operated in connection with the steamship lines of its members. Plans have been worked out, he said, for the operation of the Associated Terminals as a unit with these steamship lines and arrangements have been completed for broad expansion of the terminals during 1923. In addition to three modern warehouses and two piers in San Francisco, the Associated Terminals also operates other storage plants and terminals in different parts of California. The organization is one of the largest in the Golden state, and has always played an important part in the development of San Francisco's harbor, port and traffic since it was founded by Captain Barneson, in conjunction with Capt. I. N. Hibberd. The corporation was first known as Barneson & Hibberd, and then as the China Basin Warehouse Co., afterward changing its name to the Associated Terminals. Captain Barneson will devote the major part of his attention to the General Petroleum Co., of which he is president.

Wants to Transfer Ship from Lake to Ocean

To the Editor, MARINE REVIEW:

Question:—We have a side wheel steamer now at Chicago to be sold and delivered at a Gulf of Mexico port. She is 185 feet long, 52 feet beam over guards and 6½ feet draft. When she went into the lakes from the Atlantic she had one wheel and one wheel house



A. B. CAUTY

taken off in order to go through the St. Lawrence canals. Will she have to do this again or can she get into the Mississippi river? Can she be brought through the Erie canal to New York?

Answer:—The only practicable method of getting the steamer to salt water is through the St. Lawrence. The drainage canal connection between Chicago and the Mississippi river as well as the New York state barge canal will not accommodate a steamer of this size. In the case of the barge canal, the locks are 45 feet wide, one however, being only 44 feet wide which of course, makes this the maximum permissible width. And the bridges over the canal would prevent the transfer of this steamer on account of her height.

The limiting factors in the St. Lawrence route are the various canals, including the Welland as well as those alongside the St. Lawrence river rapids. The maximum permissible width of vessel which can go through these locks is 44 feet, lake vessels built on the lakes for ocean service being 43 feet 6 inches beam. You point out that this steamer was previously brought to the lakes through this same waterway so that, of course, this could be done again. From the information given, however, it seems like a rather difficult and expensive task to reduce the beam of the vessel sufficiently to transit the locks. Not only a wheel but the housings, and depending upon her design, some of the decks would have to be removed in order to reduce her beam to 43 feet 6 inches.

French Plan Fuel Depot in Society Islands

One of the largest coal and oil bunkering stations in the world is to be erected under direction of the French government, at Papeete, on the Island of Tahiti, in the South Pacific, according to Edouard Rivet, the new governor general of the Society islands, who recently passed through San Francisco on his way from Paris to Papeete. This station will cost complete $15,000,000, and will be established especially for the use of steamships operated by three companies now being organized at Bordeaux for service between French ports and the ports o the French colonies in Indo-China, with which France hopes to establish greater trade.

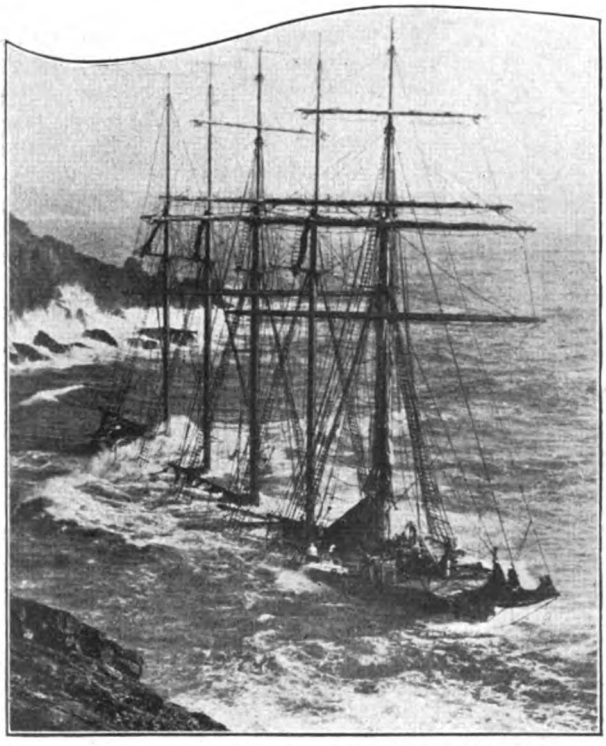
While the station will be especially for these vessels, other merchant ships also will be served.

The French government, according to Governor General Rivet, has concluded arrangements with the Standard Oil Co. of California and the Union Oil Co. to supply the station with fuel oil from California. At present the plan is to take coal from the French mines in Indo-China to the new station, but the governor general declared that he believed this would be found too expensive and that, eventually, the coal would be purchased in the United States.

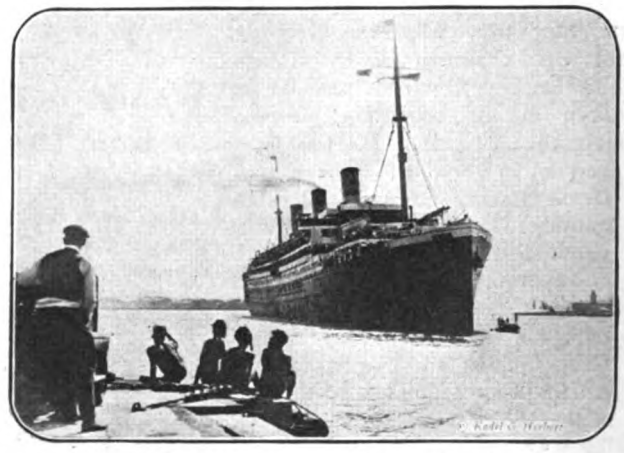
"The establishment of the coaling and oil station midway between France and its possessions in Indo-China," said the governor general, "is primarily for the purpose of developing the great natural resources of the latter and the station, while it is being erected under direction of the French government, is being financed by business men and exporters and importers in Indo-China My appointment is for five years, and during that time the French government expects to develop a comprehensive system of trade with Indo-China and the Society islands. The fuel station was planned before the war, but was never carried out, and now it will be completed as soon as possible. The route of the steamers between Bordeaux and Indo-Chinese ports will be through the Panama canal."

Generated on 2024-08-28 00:14 GMT / https://hdl.handle.net/2027/mdp.39015043584120
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

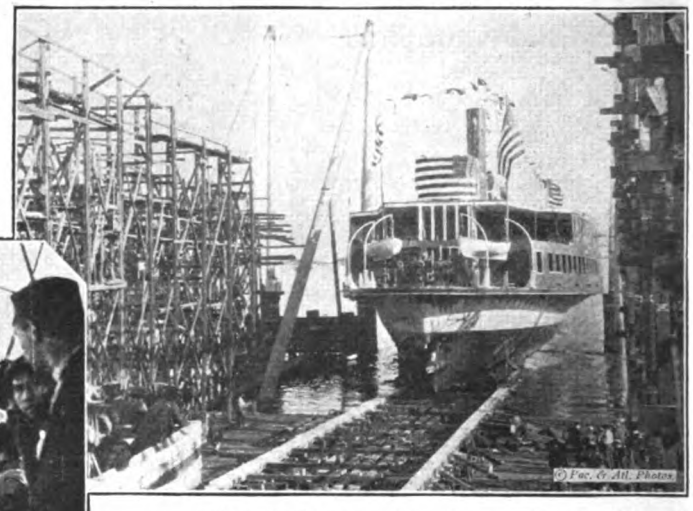
Photographs from Far and Near



German topsail schooner Adolph Vinner wrecked on Cornish coast on her maiden trip. Her crew of 24 was rescued by a line shot from the cliff. She was built at Krupp's yard at Kiel and according to English belief, was designed to convince the world that postwar Germany was too poor to build steamships.

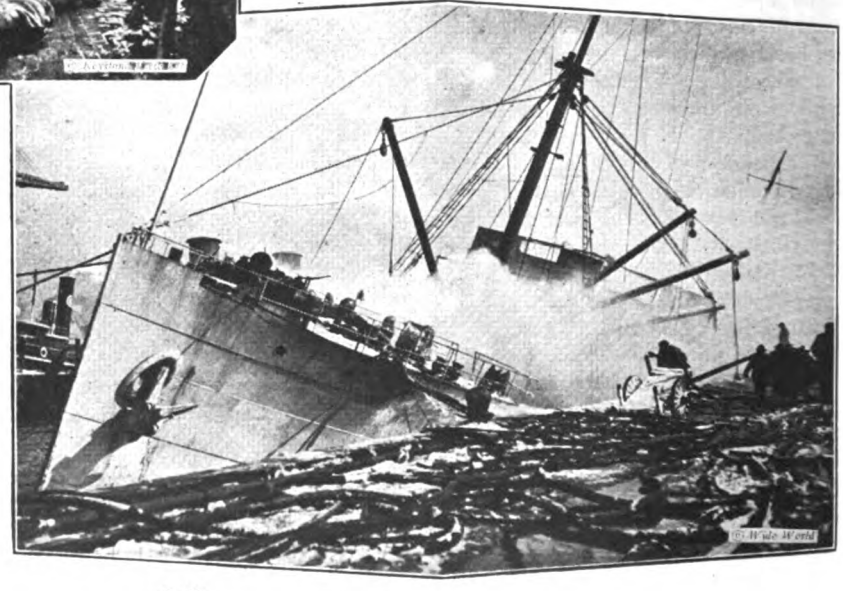


American owned liner Resolute, flying Panama flag, entering Honolulu harbor on her round-the-world cruise, a vacation trip which is gaining favor each season.



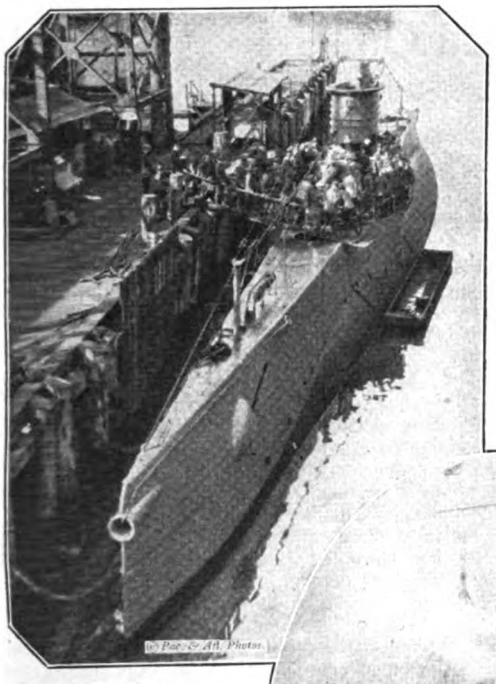
Electric-driven ferryboat Hayward being launched at Los Angeles. At left, Seattle is receiving an unskinned polar bear from an Arctic whaler.

Big fishing fleet at Boston pier. At right, steamer Sagua which caught fire while docked for repair.

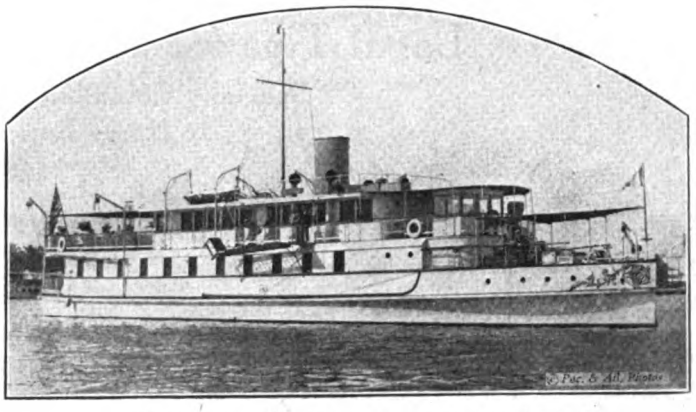


Generated on 2024-08-28 00:15 GMT / https://hdl.handle.net/2027/mdp.39015043584120
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

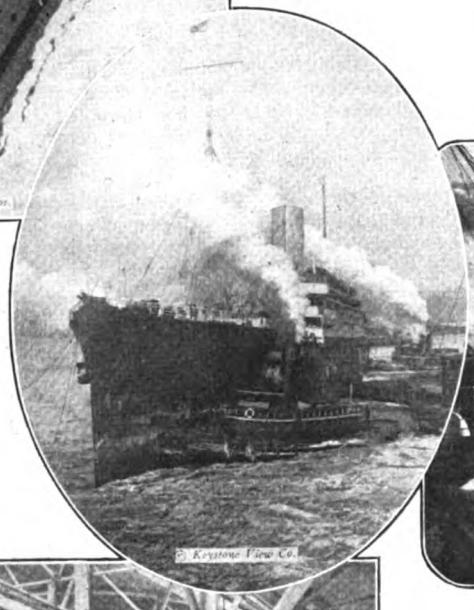
Latest Marine News in Pictures

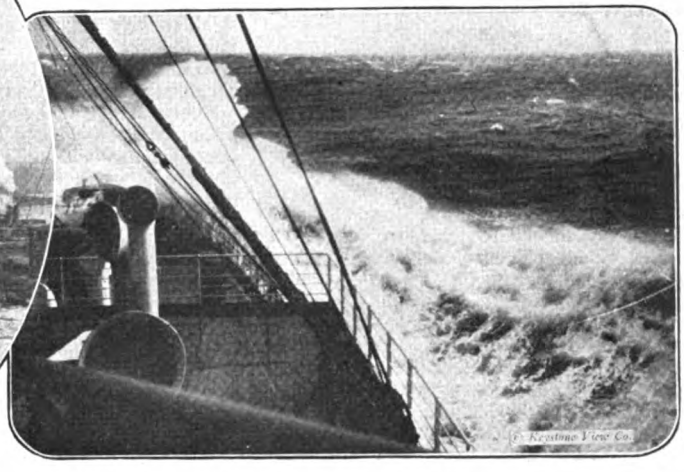


Newest American submarine S-36, nearing completion at Bethlehem yard, San Francisco. She is 219 feet long, has four torpedo tubes, cost $1,000,000.

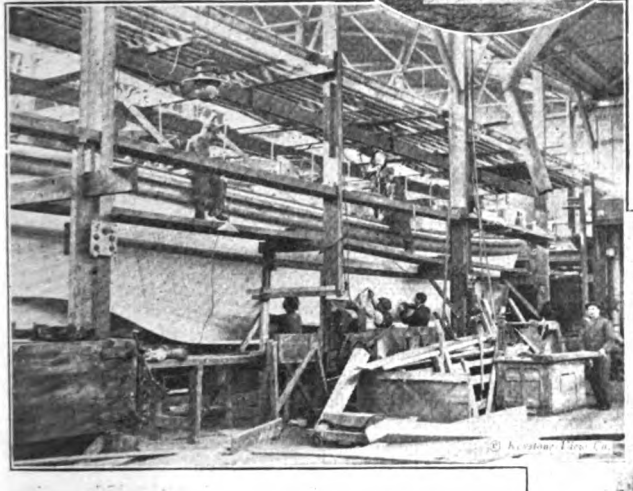


President Harding is cruising through Florida waters on this yacht, the Pioneer. She is shown just starting north from Palm Beach to pick up the Presidential party.

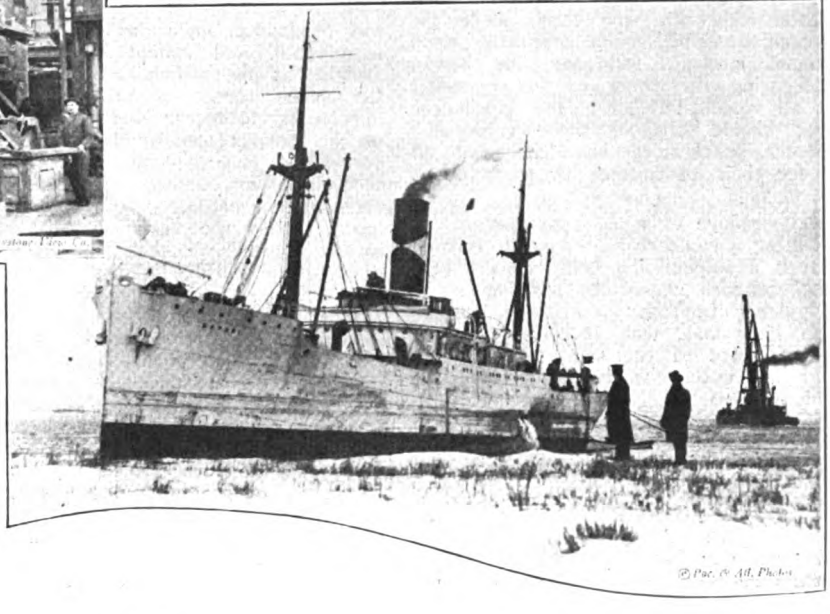




Transatlantic liners have fought some unusually severe combats with wind and ice during the past month. Above shows the angry Atlantic as viewed from the Homeric, while at left the liner Drottningholm is breasting the ice strewn Hudson.



British workmen building the first lifeboat to rely entirely on motor power and the first British lifeboat with cabin accommodation. She will carry 150 persons, with 50 in the cabins. Her length is 60 feet. At right, steamer Mayari which ran aground in a fog.



Generated on 2024-08-28 00:15 GMT / https://hdl.handle.net/2027/mdp.39015043584120
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Late Decisions in Maritime Law

Legal Tips for Ship Owners and Officers

Specially Compiled for Marine Review

By Harry Bowne Skillman

Attorney at Law

ONE furnishing gasoline on orders of the captain, pursuant to an established course of business, under which the bills had been paid periodically by the owner, was entitled to a maritime lien under the act of June 23, 1910.—NORSMAN, 271 *Federal Reporter* 15.

* * *

War regulations cannot excuse violation of statutory rules and regulations governing the length of tows as applied to commercial operations more than a year after the signing of the armistice.—BERKLEY, 271 *Federal Reporter* 35.

* * *

The customs of the Mississippi river were held in the case of JOHN D. ROCKEFELLER, 272 *Federal Reporter* 67, to be subordinate to the statutory rules and to the pilot rules. However, when not inconsistent with those rules, they should be observed for promoting both dispatch and safety, and the violation of an established custom of this sort is attributed to a vessel as a fault. Speaking to issues of the particular case, the court said that on the Mississippi river the recognized applicable customs are as follows: "Where the navigation is not materially affected by bends or other special conditions, the descending vessel should keep in the middle of the stream, and the ascending vessel should keep to her right side of the river. But, where there are bends, the ascending vessel has a right to run the points, and the descending vessel to run the bends; that is, the ascending vessel should take the course from the point on one side of the river to the nearest point on the other, to avoid the resistance of the current by keeping in the eddy near the bank, while the descending vessel should keep the main channel current, following the bends, thus using the force of the current." As all vessels navigating the Mississippi river should observe these rules and customs, navigators have a right to expect their observance by each other.

* * *

An employe of a subcontractor of an outfitting contractor cannot recover against a shipbuilding company for personal injuries caused by slipping on a gangplank improperly fastened, where such gangplank was furnished by one or the other of the subcontractors and does not appear to be a part of the equipment of the ship or to have been furnished by it. Spiess v. Sommarstrom Ship Building Co., 272 *Federal Reporter* 109.

* * *

Where a corporation hired a lighter to the owners of cotton at a specified price per day for the purpose of transporting such cotton at said owners' own charges, such corporation, it was held in Bashinsky Cotton Co. v. Sunset Lighterage Corp., 272 *Federal Reporter* 120, was not responsible for the cotton as a carrier.

* * *

The case of ESROM, 272 *Federal Reporter* 266, sets out a number of the rules governing the relationship between ship and cargo, among which are the following:

"The ship may be held liable *in rem* for damages to the cargo, even though no bill of lading or contract of affreightment was signed by the master. A shipowner may be held to the common-law liability.

"The obligation between the ship and cargo is mutual and reciprocal, and does not attach until the cargo is on board or in the custody of the master. The lien of the vessel upon the goods and of the goods upon the vessel attaches from the moment the goods are laden on board, and not from the time only when the ship breaks ground.

"The obligations which are created one to the other, then, are that the ship is bound not to injure the merchandise by improper stowage or rough handling, and, if she does, then there will be a liability *in rem*, even before the voyage is begun. If the voyage is begun, the vessel must carry the goods to destination on the terms agreed by the shipper with the charterer; for when the vessel starts upon the voyage, by implication, there is a ratification and adoption by the ship of the charterer's contract with the shipper. Then the shipper is deprived of an opportunity to retake his goods, and the goods are in the sole possession and control of the ship. So, too, the ship is then bound by the charterer's bill of lading, under which the freight is prepaid, and cannot collect further freight at destination. Before sailing, the vessel owner is protected by his opportunity to refuse to carry the goods on the terms agreed by the charterer before the voyage is commenced.

"Delay (in sailing) alone does not necessarily establish liability for damage. Unless the vessel has reasonable ground to believe that the delay will damage the cargo, liability will not be imposed."

* * *

"A rule of caution laid down by the courts—to be applied, however, with great discrimination—is that, where one vessel sees, or should see, that another is disregarding the required precautions against collision, and fails to take reasonable precaution herself, in view of the remissness of the other vessel, both will be held at fault. * * * When it is evident to a navigator of a vessel that his signals are misunderstood, he should immediately stop and reverse until his signals are understood, and he will be held at fault for failure to do so."—JOHN D. ROCKEFELLER, 272 *Federal Reporter* 67.

* * *

Where the owner of a cargo of coffee in bags applied to a firm of brokers for barges on which to discharge a part of the cargo, there was an implied warranty by the brokers not disclosing that they were acting as such, that each of the barges furnished was seaworthy and fit to sustain and carry the weight usual for boats of her size and kind. Under the oral demise of a barge for a specified use, there is an implied warranty that she is seaworthy and fit for the intended use except where the defect is patent and the charterer has had an opportunity to examine the vessel. "Carriage," said the court in the case of JUNGSHOVED, 272 *Federal Reporter* 122, "includes ability to lift a cargo and hold it afloat, and does not necessarily involve any translation of the vessel from one place to another."

* * *

Under title 53, Section 4612, United States revised statutes, as amended by act of Dec. 21, 1898, c. 28, section 23, "scows" and "pile drivers" are "vessels," and the foreman in charge of the operation of a scow on which was placed a pile driver was a seaman, and, it was decided in the case of George Leary Construction Co. v. Matson, 272 *Federal Reporter* 461, under Act of March 15, 1915, c. 153, section 20, known as the "seamen's act," in an action by a subordinate employe for a personal injury the foreman is not a fellow servant of such employer, but is the representative of the owner of the vessel. For an injury due to accident, or to the mere negligence of the master of the vessel in giving orders, even if he be regarded as the representative of the owner, a seaman has been held not to be entitled to recover indemnity, but only for maintenance and cure, and it may be that this rule is unaffected by section 20 of the seamen's act. But since under the statute the master of the vessel, or seaman in command, is not a fellow servant of those under his authority, his selection and supply of the appliance and appurtenances used for the service on the ship under his direction is the selection and supply of the owner, and for injury to a seaman due to negligence in such selection and supply the owner is liable for full indemnity for the injury.

* * *

A bill of lading is not a negotiable instrument, or a piece of commercial paper, and the doctrines favoring an innocent holder for value do not wholly apply.—ST. JOHNS, N. F., 272 *Federal Reporter* 673.

Generated on 2024-08-28 00:16 GMT / https://hdl.handle.net/2027/mdp.39015043584120
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Practical Ideas for the Engineer

Revised Rules Issued for Steel Vessels—Proper Use of Varnish—Repair Costs—Painting Lake Ships

REVISED rules for the construction and classification of steel ships were recently adopted by Lloyds. These came into force on Jan. 13, 1923, but were, however, adopted previously with the sanction of the owner in the case of any vessel already contracted for, or which had been contracted for before that date.

In recent years, many changes and developments in shipbuilding have taken place and greater attention has been paid to the scientific study of the functions of the particular parts of the structure. From time to time, various new points of view have been presented, the adoption of which has helped to make the construction of ships cheaper by the simplification of design and consequent saving of labor, while, on the other hand, by the abolition of redundant members of the structure and the redistribution of material, it has been possible to secure some saving in weight.

Relation of Scantlings and Draft

The last revision of the rules of Lloyd's Register was made in 1909, prior to which time the basis of scantlings had remained practically unaltered for many years, and had led to the recognition of numerous types of vessels, such as awning deck, shelter deck, spar deck, and shade deck.

The revision in 1909 reduced the number of types of vessels for which provision was made to the full scantling vessel and the shelter deck vessel. Experience has indicated that it is possible to make freeboard assignment independent of type, with the consequence that in the new rules the relation of scantlings to draft has been definitely taken into account for the first time. The result is the abolition of what may be termed "type" classification, and the rules of the society as now issued may be said to complete the transformation commenced in 1909, bringing them into line with modern practice and the most up-to-date ideas of shipbuilding.

Greater attention has been paid to the study and analysis of the part that is played by the various members of the structure in meeting the different strains to which a vessel is subject in the course of her career.

The existing practice, after analysis and adjustment on scientific lines, has been standardized, and generally speaking, some saving in weight has been achieved, more particularly for vessels of a restricted draft.

One of the most important points in which the new rules differ from their predecessors is to be found in the fact that Lloyd's Register has recognized the principle that within limits scantlings should be based on draft, a feature the importance of which will no doubt appeal both to owners and builders. For this purpose, the new rules provide sets of tables for two classes of vessels:

(1) The full scantling vessel, which obtains the maximum loading permitted by the dimensions.

(2) The complete superstructure vessel, in which the scantlings are adjusted to a freeboard approximate to that of the present shelter deck type with tonnage opening.

Scantlings for vessels intermediate in draft between these two types can be readily derived from the two standards by proportional interpolation.

By this system, the rules are directly applicable to practically the whole range of vessels suitable for modern requirements, and it is thought that designers and builders will obtain greater elasticity in adjusting deadweight and capacity for cargo. In addition, there will be a fairer relation throughout between the deadweight carried, and the weight of hull involved, while the same standard of performance will be maintained.

Simplify Scantling Rules

The method for determining the main scantlings has been somewhat modified from the present practice, with a view to securing simplicity and directness of application. Prior to 1909, the scantlings of the frames were regulated by a numeral formed by the addition of half-breadth, depth and half-girth. The latter dimension was dropped in 1909, leaving the frame number to be determined by the sum of the breadth and depth. The considerations which led to this revision have now been carried further, and under the new rules the size of the frame and frame spacing will depend on the depth of the vessel, associated, as at present, with the unsupported span of the frame.

In accordance with the general tendency in shipbuilding, opportunity has been taken in the new rules to provide for an increase of frame spacing in excess of the present practice of the society, an increase which is considered to be justified by experience, and to have the advantage of reducing the cost of construction.

Certain simplifications have been made in regard to ordinary connection bars, which were formerly considered to be parts of the main structure, but which are now looked upon as means of connection only.

Plating Around Deck Openings

A marked improvement has been effected in the tables giving the scantlings for the topsides, particularly as regards the permissible breadths of hatchways and their openings in the decks. In the new rules, it is provided that where the breadth of the deck openings differ from that stipulated, the thickness of the deck plating is to be increased, or reduced, subject to the provision of a minimum thickness. In the case of full scantling vessels, provision has been made to vary the scantlings of the frames and the thickness of the top side material in proportion to the length of vessels covered by superstructures, such as poops, bridges, and forecastle.

The bulkhead committee, in their report issued in 1915, included tables giving suggested bulkhead scantlings. This question has recently been under consideration internationally, and there have been included in the new rules the modified scantlings, which show some reduction from previous requirements.

Reviewing broadly the revision of the rules, it may be said that there have been reductions in the material at the sides of vessels and increases at the decks, which together with the advantages obtained by the corelation of scantlings and draft have produced a combination which affords some economy in weight of material, at the same time maintaining a high standard of construction.

Regulations have also been formulated for vessels in which the full seagoing requirements are not necessary, and in particular special tables

Generated on 2024-08-28 00:15 GMT / https://hdl.handle.net/2027/mdp.39015043584120
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

have been formed for the construction of trawlers.

Rules for the construction of oil vessels, first published in 1909, and representing the practice of that time, have now been withdrawn, and new rules are at present in preparation.

Radio Compass Is Tested

A radio compass installed on the lighthouse tender SEQUOIA was successfully tested during a fog recently in San Francisco bay when she took up the automatic signals sent out by the lighthouse tender MADRONO. A number of times the SEQUOIA was placed off her course only to pick it up again by radio bearings. The tests were conducted under direction of Capt. H. W. Rhodes, superintendent of the eighteenth lighthouse district.

Varnish Keeps Ships Looking Bright

BY CAPT. E. ARMITAGE McCANN

ALTHOUGH this is an age of steel, particularly so in shipbuilding, in every ship from tramp to ocean liner wood still is used extensively for houses, interior finish, doors and rails. Some of this wood work is finished bright in its natural color with varnish. This is as it should be as today's ships are the lineal descendants of the wooden vessels in which pride was taken to show as much as possible of the beauty of the wood from which they were built.

This varnished work, however, especially on deck, requires considerable attention. When paint becomes shabby it has as a rule a smooth surface and needs only another coat of paint. The bright work receives the same treatment but should not. It absorbs dirt and becomes dark in color and rough in surface. To preserve a good appearance, a fresh coat should never be applied without rubbing down the old, and only good quality, suitable varnish should be used. Varnish should be limpid, brilliant, transparent and durable and should protect and increase the beauty of the wood as in an airtight glass case. It should be elegant in itself whether of glossy, flat or egg shell finish.

Care in Buying

There are some 200 different kinds of varnish, all much alike in outward appearance though in actual quality ranging from the finest to the poorest, so that buying varnish is really a matter of trusting to the integrity of a reliable firm. Even with this precaution, it is well to know what varnish is in order to buy intelligently and to be able to test the product obtained.

Varnish may be first divided into two classes, the spirit and the oleoresinous. The former is shellac dissolved in alcohol, 3½ to 5 pounds to the gallon, and is chiefly used for floors and the like where a glass hard surface and rapid drying qualities are required but a fine surface and elasticity are not needed. It is frequently mixed with pigment where some opacity is wanted. A fine surface may be obtained but it has to be used so thin that eight or nine coats are necessary.

Lightness Not Excellence

Lightness in color of varnish does not denote excellence. A darker kind frequently is better and should be used where the color of the surface will stand it, such as teakwood. Overcooking of the varnish will darken it; this is sometimes resorted to, not for the color, but because it will then stand more turpentine thinning and is consequently cheaper. This naturally reduces the lasting qualities as the turpentine has no value. The best varnish for all-round outdoor ship work is "spar varnish" which contains 25 to 30 gallons of oil to 100 pounds of resin, a little drier and thinned with turpentine.

Turpentine is a good thinner; benzine is not. The former partakes more of the nature of a resinous oil, but the latter has nothing in common with the resins. Turpentine is a thinner only and dries right out of the varnish. It does not aid in the oxidation of the oil as do lead or manganese oxides. Some painters have the habit of adding drier to everything. This is a careless practice as its addition should be a matter of careful judgment, because the less drier the better. In any case none should be added to varnish. It usually contains some when purchased, but that is a different matter as it is carefully amalgamated in the making.

It should be remembered that every hour of quicker drying means months less of endurance.

Varnishes vary in price from $1 to $6 or more per gallon. The most expensive, however, may not be the best for the purpose and the cheaper kinds are not good for anything. This is quite understandable as good material must be used. It has to be carefully and scientifically made, filtered and ripened for from 12 to 18 months. A low priced varnish if full in body will pull and drag, streak and lump, or if it works easily will be thin and watery and of no covering or preserving value. A good varnish should be both hard and tough and should be elastic, which does not mean soft and sticky.

Some of these points can, with practice, be ascertained before the varnish is used, by smell, touch and appearance. The best test for varnish is to put a coat on a hard, dry surface, let it dry thoroughly and then place a damp sponge on it for some hours. If it turns white it will have absorbed some water. The finest varnish will bloom in this manner but if it is good the bloom will dry right out. If it remains white the water will have dissolved out part of the varnish and the quality is wrong.

Labor Is Chief Cost

The cost of the labor in applying varnish is much greater than the cost of the material, so why pay for varnish that will check, crack and bloom, will blur and disintegrate or crumble and spoil the beauty of the surface covered when you may have varnish that will last three or four times as long and keep the wood or color work new and beautiful with a smaller ultimate cost?

Regarding the preparation of the surface for varnishing it must of course be perfectly smooth and it must be dry and free from grease. The chief causes of cracking, crawling and blistering of varnish are damp surfaces or grease from finger marks, clothes, or the natural grease of the wood. If there is any possibility of this, the surface must be cleaned and if the wood is of a greasy nature it should be given a first coat of linseed oil. All wood is the better for this but it has a tendency to darken and takes longer to dry than the varnish.

Inside work should have the grain filled. For this there are some good mixtures on the market, about the best being ground quartz in a thin quick drying varnish. This is colorless. It should be applied with a short stiff brush and rubbed off with excelsior across the grain. If nothing else is available a thin putty may be used, tinted if the wood is dark. This may

Generated on 2024-08-28 00:17 GMT / https://hdl.handle.net/2027/mdp.39015043584120
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

be rubbed in with a piece of canvas but the surface must be sandpapered before the varnish is applied so that the putty is in the grain only. For outside work it is better to do the filling with the varnish itself, rubbing down the first few coats. When rubbing down, the sandpaper will be found to work better if used with oil, heavy mineral oil being the best. The paper will cut quicker yet more smoothly and more economically if a saucer of turpentine is kept handy to rinse it in when clogged.

When it is necessary entirely to remove the varnish, it can be done with a lamp but this requires skill beyond that of the average seaman. It can be done with caustic soda but this also is too risky because of its effect on the varnish to be applied. A strong solution of lye will darken and discolor the wood. If it has to be used, be careful to see that the surface is thoroughly washed and then sandpapered with dry sandpaper. The best method is to use ready made varnish removers which will take the varnish off smoothly and not injure the wood. They also must be thoroughly cleaned off, preferably with gasoline or the like, before revarnishing.

It is a better custom, however, always to keep the bright work in good condition by rubbing down each time before giving a fresh coat of varnish. As many coats will not be needed if the surface is frequently washed with a soft rag or sponge and clean water, using good soap if necessary. Do not use pearl ash, lye soap, scrubbing brush or hot water.

When applying varnish the best practice is to brush it on with the grain, then across, then with the grain again. This must be done quickly or the brush will pull and spoil the glossy surface. The first coat will take about a gallon for each 600 square feet and the second and third about the same to every 800 square feet.

Some confusion exists between resin and rosin. The former is one of the gums which will make good varnish. The latter is the residue remaining in the still after spirit of turpentine has been distilled from raw turpentine. It is all too frequently used in making cheap varnishes, but though it gives a brilliant surface of light color, it cracks and crumbles, rubs off and turns white with water.

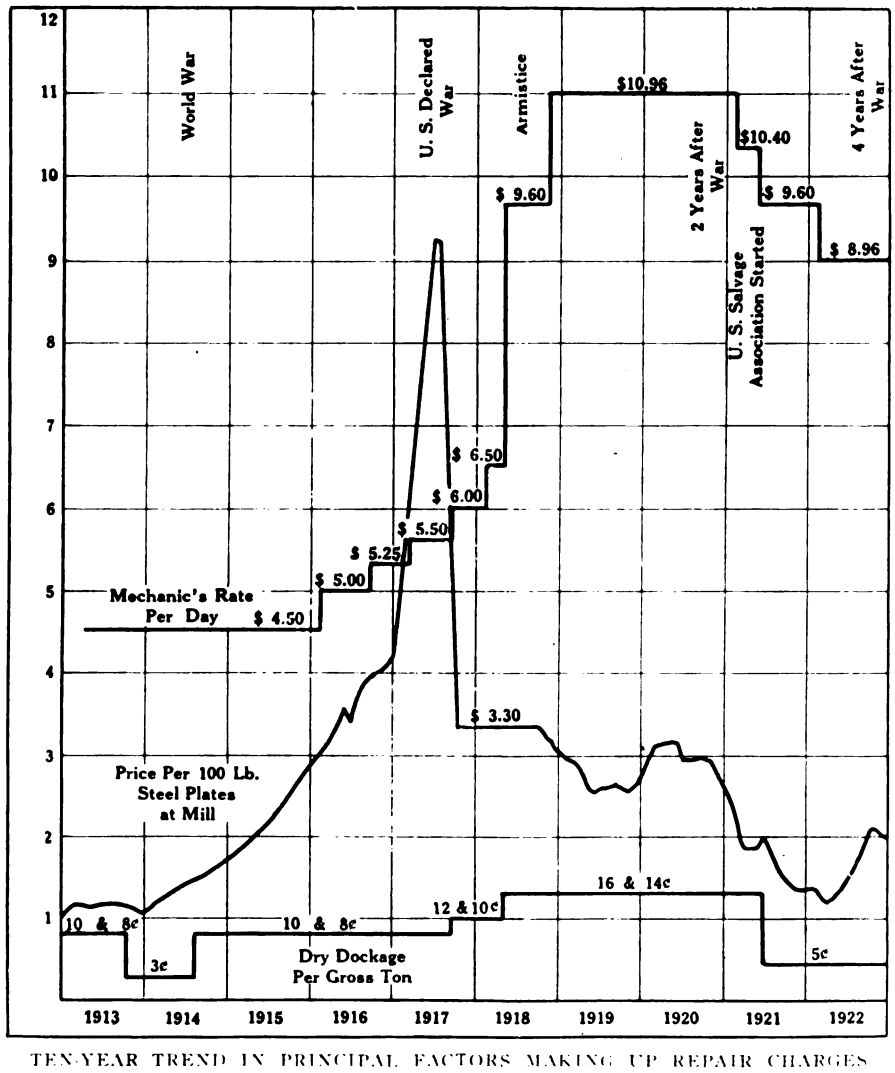
Another point that is frequently questioned is the quality of turpentine. A good test is to put two tablespoonfuls in a saucer and set it in the sun. It should evaporate in two or three hours without leaving a greasy or sticky residue.

The ship's officer can not be expected to get the results of the carriage or piano varnishers who are skilled workmen doing nothing else and working in dustproof, evenly heated shops with varnishes carefully graded to their requirements. Nevertheless, the bright work aboard does show the favorable effect of attention, skillful handling and good material.

Ten-Year Trend in Ship Repair Costs

THE accompanying chart, graphically presenting the fluctuations in costs of three major items entering into that class of ship repairs due to dangers of the sea, grounding, collision and heavy weather, has been prepared by W. C. Foley, chief surveyor for the United States Salvage association, in conjunction with Frank Wright, of the Insurance Co. of North America, Philadelphia. Definite variations are shown in mechanics' wages, in steel plates and in charges for drydocking, in the New York district.

Taking the lowest point in costs, the end of 1913, and comparing these costs with those prevailing at the end of 1922, shows that mechanics' wages have increased from $4.50 per day to $8.96 per day, that steel plates per 100 pounds at mill have increased from $1.15 to $1.90, that drydocking per gross ton has increased from 3 cents to 5 cents. In making this comparison it should be borne in mind that there is a certain logic and solidity in the prices quoted for labor and steel plates, and that these are not liable to any further sudden fluctuation, but that the present charge for drydocking is now really abnormally low, and that the low point reached in 1913 and 1914 was due to a particularly violent rate war among the different drydock people of the district. It will be noted that earlier in 1913 the charges for drydocking were 8 to 10 cents per gross



TEN-YEAR TREND IN PRINCIPAL FACTORS MAKING UP REPAIR CHARGES

Generated on 2024-08-28 00:14 GMT / https://hdl.handle.net/2027/mdp.39015043584120
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

ton, and that consequently the charges today are really below the regular prewar rates. On account of the large number of additional drydocks in the New York district since prewar times and the great reduction in number of ships in operation, no immediate advance in drydocking rates is expected even though the rates are lower than early in 1913.

Assuming certain arbitrary relations in proportion of total cost, of the three items shown on the chart, a percentage of total increase of ship repair costs today over those at the end of 1913 is obtained which approximately represents the difference. Taking labor at 75 per cent, drydocking at 19 per cent and steel at 6 per cent of the total cost of a job, the total increase will be 90 per cent. With the same relative proportion of labor, drydocking and steel, a comparison of costs prevailing at the end of 1922 with costs in September, 1913, gives an increase of 67 per cent. This figure represents more truly the difference between prewar and present day costs of the three fundamental factors covered in the chart and entering into ship repairs than does the 90 per cent obtained by using the abnormally low drydocking rates at the end of 1913.

The above is an indication of present day costs of repairs as labor is invariably the greatest item of expense. Other factors such as freight rates, overhead and handling charges will have lesser influence and may tend to increase the charges somewhat. Again comparing September, 1913, with the end of 1922 and assuming labor to be 85 per cent of the total, drydocking 9 per cent, and steel 6 per cent, an increase at the present time in total costs of repairs of 80 per cent is obtained.

From the above analysis as a fair average indication, present ship repair costs show an increase over prewar costs, that is prior to the middle of 1914, of 75 per cent. Though the accompanying chart and the above analysis is more directly applicable to that class of ship repair work which comes under repairs on account of insurance, since the proportion of labor in any job predominates, it may be applied with a fair degree of accuracy to general ship repairs. Any further reduction in ship repair costs will come only as efficiency in the methods is increased.

New Paris Office

TO PROVIDE better facilities for handling its business in western Europe, the Paris office of MARINE REVIEW *has been moved from 224 Rue de Rivoli to 23 Rue de la Bienfaisance. The new location is only a short distance from the general offices of the Comite des Forges and other prominent French marine and power boating interests. The telephone number at the new office is Wagram 3533 and the cable address is unchanged: Irotrapri, Paris.*

Representatives of the American marine and power boating fraternity are especially invited to make use of the facilities of our Paris office when in Europe. The office remains in charge of Vincent Delport, French correspondent, and under the general direction of the European headquarters of the Penton Publishing Co., in Caxton House, Westminster, London. The Penton Publishing Co. also publishes Iron Trade Review, Daily Metal Trade, The Foundry, Abrasive Industry and Power Boating.

Painting Ships' Bottoms on Lakes

BY A. C. HOLZAPFEL

IT IS peculiar that the fouling of the bottoms of ships on the American lakes is considerably less than on the lakes of other countries. For instance, in Switzerland steamers plying on the Swiss and north Italian lakes have to dock and paint their bottoms once every year as otherwise during the hot summer months, the bottoms become covered with grass. This reduces their speed and increases fuel consumption at such a rate that it pays the owners better to clean and repaint the bottoms every spring before the vessels are put into commission.

On the American lakes, the chafing of the bottoms against lock walls, docks, etc., causes a removal of some of the paint and roughens the surface, resulting in surface friction. The loss of speed, however, of lake ships has been so small that in view of the low cost of coal which prevailed till a few years ago, it was not thought worth while periodically to dock ships for the purpose of repainting their bottoms in order to obtain the additional speed which would result from a perfectly smooth bottom. The price of coal, however, which was formerly between $2 and $3 has since advanced to about $6 per ton. Thus the question now arises whether it would not be worth while for shipowners plying their vessels on the lakes to dock them once a year or once in two years and to apply to their bottoms a composition which will prevent the formation of the comparatively small growth of grass which otherwise would take place and retard the vessels' progress.

The paint usually applied on the lakes has been either red lead or oxide of iron, both oil paints, which take a considerable time to dry. The fact that the application of two coats of such paint would necessitate the vessel remaining in drydock for at least two or three days has perhaps contributed in some measure to the practice so far prevailing. It must, however, be known to the shipowners on the lakes that seagoing vessels which are docked once every six to twelve months in order to maintain a clean bottom and their full normal speed are almost invariably cleaned and painted within 24 hours or less and that the quick drying anticorrosive and antifouling paints which are used at seaports make this thoroughly practicable.

So far these materials have found no adequate outlet on the lakes. It is, however, to be assumed that a close study of this question will prompt shipowners who operate their vessels on the lakes at least to try this practice of docking their ships once a year and applying to the bottoms an antifouling composition which would enable the vessels to maintain their full normal speed throughout the year's work.

The author, A. C. Holzapfel, is president of the International Compositions Co., Inc.

Sale of Board Vessels

It is reported that the Lone Star Steamship Co., Galveston, Tex., has bought from the shipping board the LAKE GERA of 4155 tons deadweight and 2637 tons gross. The Hammond Lumber Co., San Francisco, is reported to have bought from the shipping board the LAKE PEPIN of 2989 tons deadweight and 1997 tons gross.

Capt. Garland Rotch, Seattle, who has been master of shipping board vessels for several years, has been promoted to the position of director of operations for the shipping board in Argentina and Uruguay. Until his recent promotion he was chief assistant in the board's Buenos Aires offices.

Generated on 2024-08-28 00:15 GMT / https://hdl.handle.net/2027/mdp.39015043584120
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Editorial

British Distort American Policy

INTERESTING revelations of the attitude of British shipping interests toward the American merchant marine developed at the annual meeting of the Liverpool Steam Ship Owners' association which was held Feb. 13. In a report presented on behalf of the directors it is stated:

"Any attempt to keep all international trade with the United States for vessels under the American flag, by penalizing in its ports vessels under other flags, would react disastrously on the American shipowners. Every voyage on such trade must either start or end in a country other than the United States, and in all those ports the American shipowners would be exposed to the risk of retaliatory measures directed to offset the disabilities imposed on foreigners in United States ports.

A Merchant Marine Is "Unimportant"

"It would appear to this association that at the moment some nations are disposed to attach undue importance to the possession of a mercantile marine, and that in great measure this feeling has been created by the introduction of the term 'sea power' into the relations between merchant shipping and overseas commerce. It is impossible to use the term 'sea power' without denoting some kind of force or compulsion, but international commerce must be carried on without force or compulsion. Within its territories, a state may conceivably compel its citizens to buy and sell, but world commerce is the sum of innumerable transactions effected all over the world between willing buyers and willing sellers.

"The carrying facilities afforded by merchant ships are sold and bought in exactly the same way as coal or wheat, and it is an error to suppose that the possession by a nation of the ability to provide such carrying facilities creates any power differing from that created by the possession by any other nation of the ability to provide the cargo to be carried. In both instances the ability to provide, no doubt, confers power on the possessor, but it is in no sense such a power as that termed 'sea power.' At the most it confers the power to bargain.

"International commerce is not, and can not be, the exclusive concern of any individual trader or of any individual nation, and it is on this broad ground that the association has protested against the proposals that have been under consideration in the United States during the past year. It is, beyond the shadow of a doubt, within the competency of the United States to grant any subsidy or bounty it pleases to its own merchant shipping. The justification for such grants is almost always based on the plea that the national ships are operated at greater cost than vessels under other flags. On the other hand, any attempt to go further, as was suggested in the proposals that have been under discussion in the United States, by penalizing in its ports the ships of other nations, raises entirely different considerations. All such penalties are designed to drive the ships of other flags out of the freight market, and if they attain their object a monopoly is secured for the national ships in commerce which essentially is not national, but international. When this point is reached, the national ships will become the masters and cease to be the servants of all the overseas commerce with the country by which the monopoly has been conferred."

From the foregoing, British shipping interests clearly persist in the belief that the American merchant marine policy is designed to prevent foreign ships from having any share whatever in American commerce, whereas all that American policy aims to accomplish is to give American ships a fair proportion of international trade. A great deal of the bitterness exhibited toward American shipping in Great Britain is due to these false conceptions of American policy which have been religiously fostered by British shipping interests for two years or more. Furthermore, if Americans attach "undue importance" to the possession of a merchant marine, we are only following feebly in the wake of our British friends, who have certainly left nothing undone which might exalt the importance of the British mercantile fleet.

Fight for Government Ownership

OPPONENTS of the subsidy in the senate love inconsistency. As a matter of fact, many of them would not be in the senate if inconsistency were not common in American political life, so that their affection is understandable.

For instance, Senator Brookhart of Iowa, in opposing subsidy, called attention to the loss of 10,000 cars of Washington apples through high freight rates and the difficulty in securing cars and ships. Consequently he favored government ownership as the means of preventing such conditions. But when advocates of a subsidy point to the low freight rates at which last year's grain crop was carried across the Atlantic and point to this as indicative that the United States must continue to own and operate a big fleet of commerce carriers, the Iowan senator hops over the fence. He refuses to see any benefits in this condition to the farmers although seeing the detriment from the opposite condition as it affected Washington apple growers.

As a matter fact, many of the opposing senators are socialistically in favor of government ownership and refuse to appraise any subsidy argument for its economic value. The goal of government ownership is to be gained despite any lack of logic in the methods employed to win that goal.

Generated on 2024-08-28 00:23 GMT / https://hdl.handle.net/2027/mdp.39015043584120
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Uncle Sam as a Surplus Salesman

Federal Government Uses Merchandising Methods in Disposing of Immense Stocks of War Materials

BY MAJ. JAMES L. FRINK

SOON after we declared war on Germany, the far-seeing mind of the general staff of the army began a consideration of the ways and means of liquidating surplus supplies which were bound to accumulate. The result of this foresight has been the reclaiming of approximately $1,000,000,000 for the treasury, and the saving of several hundred million more.

In May, 1918, congress first authorized the President, in his discretion, to sell such surplus materials as might accumulate. Two months later the president's powers in the disposal of surplus property were considerably broadened. These dates are of first importance, because of their indication of the fact that even in the midst of war the department charged with the defense of the nation was preparing for peace. They also indicate the sound judgment displayed by the war department in anticipating conditions, which resulted in the so-called "buyers' strike" in 1920.

Early sales made between the date of passage of the first emergency legislation regarding surplus property and January, 1919, were supervised by a committee of the war department general staff under General Goethals, and amounted to some $123,000,000. Soon after the signing of the armistice, the amount of business became so great that it was impracticable to handle it longer through a committee, and accordingly, in December, 1918, a sales branch was established under an official designated as the director of sales, whose duties may be defined briefly, as follows: To formulate, supervise and co-ordinate the selling of surplus supplies, material, equipment, by-products thereof, buildings, plants, factories or lands embraced within the act of congress approved July 9, 1918.

At the time of the establishment of the office of the director of sales, estimates of the probable total amount of surplus that would eventually result from demobilization and the decreased requirments of the permanent peace-time military establishment varied between two and three billion dollars. The surplus consisted of an almost untold variety of articles. The quartermaster corps alone listed more than 65,000 separate items exclusive of transportation and real estate. The grand total of items listed by all services ran over 100,000.

Classification of Property

Major classification of property included airplanes and electrical equipment; animals; building materials; chemicals; clothing of every description, including millions of uniforms, underwear, socks, hats and other articles; soldiers' equipage, such as canteens, cups, knives and forks, haversacks, tin hats; electrical equipment, ranging from small fuses to complete power plants worth a million dollars each; metals, ferrous and nonferrous; fuel; hardware; land and buildings; leather; lumber; machinery and engineering equipment ranging in size from a small pocket compass to the largest cranes built; machine tools; medical and hospital supplies; motor vehicles; animal-drawn transport and equipment; office and household equipment; railway materials and rolling stock; floating equipment, from small row boats to the largest ships; ammunition; foods; textiles and wool.

MAJ. JAMES L. FRINK

The large quantities of surplus held in these various classifications presented a liquidation problem filled with difficulties and fraught with danger, not only to the public welfare but to that welfare's never-failing barometer—our national commerce and industry. Various liquidation plans were put forward, some enthusiastic and well meaning gentlemen with limited knowledge of economics even going so far as to seriously suggest the entire surplus being dumped into the sea.

The folly of any such procedure as this brings to my mind a remark made recently by the secretary of war in an address before the Newark chamber of commerce, in which he stated "the truth is that we must recognize that property is not created for despoilment, but for the welfare of humanity and that it must receive the protection of organized governments and all classes of citizens or progress will cease." While this remark of the secretary's was not made in relation to surplus property, it shows why the war department would not consider the absolute destruction of such a large quantity of material.

Another plan put forward and which received serious consideration was what is commonly known in commerce as "dumping," that is, throwing the entire surplus on the market, regardless of price or other consideration. To the minds of those charged with the responsibility of the disposal of war surplus, a plan such as this with industry at that particular time carrying its peak load, would have been little short of criminal, a knife thrust in the heart of business. The war department fully recognized its responsibility for the public welfare and took into account every angle of possible ill effect of such a plan on established trade and industry. Because of its probable disastrous effect, this plan was eliminated.

Store Plan Impracticable

Still another plan that suggested itself as being particularly adaptable for a wide range of materials was the establishment of a number of government-owned stores. This plan was tried out in a limited way, but found impracticable. The overhead of these stores soon reached a point which made their further operation unprofitable. The government could not meet private competition. It was impossible to keep complete lines of all items in stock without placing fill-in orders with manufacturers. This would have been outside of the authority of law, and contrary to removing the

From an address delivered at the invitation of various chambers of commerce and business organizations. Maj. James L. Frink is chief of the sales promotion section of the war department, Washington.

Generated on 2024-08-28 00:14 GMT / https://hdl.handle.net/2027/mdp.39015043584120
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

government as a competitor in business, which was the final object of liquidation, would eventually have resulted in involving the government still more deeply. These stores were useful, however, in introducing to the public a variety of articles for which previously there had been little general use and practically no demand. In other words, they created a market in which they themselves could not compete. The government had to give way to private business, which could and does keep lines well balanced with fill-in orders, thus helping the manufacturer and the jobber.

Out of the discussion of the various plans suggested, there developed a very definite policy, safe, sane, reasonable and in keeping with the interest of business men, as well as the interest of individual citizens and taxpayers. That policy was the gradual liquidation of surplus, the rapidity of such liquidation being governed by the ability of the markets to absorb the various commodities without undue interference with established industry, while at the same time safeguarding the public interest in every possible way.

No Competition

In the application of this set policy of liquidation, the establishment of the office of the director of sales was one of the first essentials. The various supply services of the army such as the quartermaster department, the ordnance department, air service, engineer corps, signal corps and others, each had in their possession and controlled a large amount of property, much of which was to become surplus. Had these services been permitted to act independently of each other in the disposal of this surplus, it would have been impossible to have prevented one competing with another. There would have been no such thing as effective supervision and nothing at all of that co-ordination so necessary to success. Each of the services I have just mentioned designated an official to supervise and control the disposal of all surplus property held by that service. The activities of these officials, usually known as surplus property officers, were in turn co-ordinated and controlled through established channels from the office of the director of sales. The magnitude of operation is reflected by the sales figures of the two largest services; the quartermaster corps, which to Dec. 15 last had disposed of property which cost the government approximately $1,500,000,000 and the ordnance department, following with approximately $675,000,000.

During the first year of liquidation, sales were made by negotiation, sealed bid, fixed price and auction. Each succeeding year has increased the difficulties of selling, and caused a revision of our methods. At the present time no sales are made by negotiation unless the property concerned has first been offered to the public at large by sealed bid or auction and failed to bring a satisfactory offer. Besides, experience has proven that, as a rule, on commodities such as are now being offered, higher prices are obtained by auction than by any other method.

Large Surplus Remains

The progress of liquidation has in the main been extremely satisfactory and gratifying to those connected with the business organization of the government. Sales have kept abreast the declarations of new surplus reported from the various supply departments and from now on should exceed these declarations by a good wide margin. Since the establishment of the office of the director of sales property originally valued at over $2,000,000,000 has been sold and the visible supply reduced to about $200,000,000. Estimates of future surplus to be reported will swell this total to approximately $400,000,000 cost value, which still remains to be sold.

An interesting problem that confronted the ordnance department was the disposition of an enormous amount of ammunition for artillery and for small arms. There was no domestic market for ammunition as such, government-owned facilities were not equipped to break down this ammunition in large quantities, nor did the government desire to assume the risk involved. I do not believe more consideration has been given to any single proposition that has come before the director of sales, nor do I believe that a more complete or searching investigation could have been made to secure the best interests of the government before and after making the contract that was entered into. This contract was made with a large salvage corporation, which undertook to take over the ordnance stocks "as is" "where is" all ammunition, unload it, break it down into commercial products, such as scrap metals and chemicals and place these products on the market. The contract provided for the government to receive 40 per cent of the gross proceeds of sale, the salvage company 60 per cent, while the control of the price was retained by the ordnance salvage board. Thus was the government enabled to dispose of its huge holdings of ammunitions without the outlay of a single cent for additional overhead expense, without incurring any liabilities whatever, and by its control of price undue pressure on the regular markets was prevented. Furthermore, the particular interests of industry were additionally safeguarded by turning this ammunition over to the salvage company at times and in such quantities as not to unduly disturb the industrial equilibrium.

Picture if you will, more than 100,000 items, each with a market problem of its own. The quantities in which some of these items were held demanded the utmost care and consideration be given to their disposal. Let us take one item, wool, the disposal of which is typical and illustrates clearly how the government's methods have worked for the good of all.

It should be recalled that the government through the quartermaster corps of the army took over the entire wool clip of 1918, together with all wool in the hands of dealers. The total amount taken over by the government was slightly in excess of 674,000,000 pounds, at a cost of approximately $478,000,000, or an average price of 71 and a fraction cents per pound.

The liquidation of the wool stocks of the quartermaster corps, began under the direction of the present quartermaster general who at that time was zone supply officer at the army supply base, Boston. In this work he was ably assisted by Albert W. Elliott, chief of the wool top and yarn branch of the Boston depot. A large measure of credit is likewise due Col. Ralfe, quartermaster corps, whose able supervision of the work at the Washington end made possible its prompt consummation.

Wool Recovered 86 Per Cent

Prior to the armistice the government had allocated for use about 210,000,000 pounds, leaving on hand available for sale as surplus about 465,000,000 pounds. The total recovery on the entire purchase was remarkable, the average percentage being in excess of 86 per cent of the cost, and this squarely in the face of approximately a year and a half of most serious business depression in 1920 and 1921.

The liquidation of this enormous stock of wool presented innumerable difficulties and the decision to dispose of it through a series of auction sales to properly safeguard the interests of the government and of industry met with considerable opposition from several sources. Notwithstanding this opposition, the government persevered in its plan. The complete disposal of this government-owned wool was consummated by auctions divided into 49 series, comprising 118 separate auction sales and nine sealed bid sales.

Early in the summer of 1920, after the long expected readjustment in wool values had become apparent, all wool sales were temporarily suspended to permit conditions to settle. The readjustment process in wool and woolens was extremely severe, and every reasonable measure was taken to protect the interests of the wool industry of the country, consistent with the best interests of the people. Not a pound of wool was marketed from then

Generated on 2024-08-28 00:24 GMT / https://hdl.handle.net/2027/mdp.39015043584120
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

until September of the following year that would come into direct opposition with domestic grown wools. The department fully realized the condition of the wool producers of the West, who were in financial distress, owing to the wool break of the summer of 1920, and the quartermaster general offered only low grade wools of South American growth. This was good business for two reasons; first, that it afforded a great measure of relief to our own wool industry; second, the only wool market that existed, worthy of the name, was for low grades, suitable in the carpet trade.

Early in the year 1921, the present administration came into power and final authority on wool methods was invested in the assistant secretary of war, Mr. Wainwright. The effects of the emergency tariff in the wool industry became apparent in September of that year and wool prices advanced slightly. The government stock of wool of low grades which had been set apart as suitable for carpets, by that time had become depleted, and medium to low grades began to be included in the offering. From then on, all wools were offered successfully. The wool auction room in Ford Hall, Boston, was crowded at every sale. There was keen competition for all qualities, with constantly advancing prices. The final sale was held in March, 1922, and the government went out of the wool business.

Another instance of the department's desire to co-operate with industry in every possible way consistent with the best interests of the government, was in the sale of some 56,000,000 pounds of brass cartridge cases. This sale permitted the absorption of this large amount of metal without disrupting or unsettling market conditions. The government's plans for the sale were announced, and raised widespread interest. Bids were received from a wide range of industrial concerns. The price paid to the government was based on the market value during the month in which the material was moved, as reported by three recognized business papers, less a deduction of 2 cents per pound for refining. The terms of sale on which the final award was made provided for the placing of this material on the market over the period of one year at prices which varied and were contingent upon market conditions, thus preventing the possibility of the material being used for the purpose of unsettling or unduly influencing the market and eliminating any possible unwarranted speculation.

Small Buyers Considered

The war department sales campaign has been unique in many respects. The methods of sale adopted have provided for the disposal of stocks at points at which they are located, in such a way as to permit the small buyer, as well as the large buyer, to participate. Every possible precaution has been taken to prevent the creation of a monopoly which might enable a purchaser to charge exorbitant prices and realize undue profits. The methods adopted have protected the manufacturing industries of the country against ill effect not absolutely unavoidable in the liquidation of such large stocks and at the same time they have secured for the users, the public, the advantage of low prices, at which they were able to buy commodities readily usable.

Few sales have been made on any other than a strictly cash basis, except that in the auction sales bankers' acceptances, payable in 90 days, issued by the banks of the federal reserve system, have generally been authorized for acceptance up to 80 per cent of the total purchase price. Prices received have ranged from as low as ½ of 1 per cent of the original cost to as high as 116 per cent. Much of the material sold, especially during the past year, has been of special design, with little, if any commercial use.

Notwithstanding the loss on this class of materials the result to Dec. 15 last was an average return of 41 per cent of the original wartime cost. This stands as an achievement of which the government may well be proud. Bought at the peak of prices, sold over the scaling down period in their markets, a large portion of special material of little or no value to industry, some reclaimed material, not a nickel's loss written off on inventories, yet a return of 41 per cent of the original cost.

More Offers Received

Not a single traveling salesman has been employed, but instead, with the exception of the office of the director of sales, dependence has been placed in government agencies already existing, supported by a well defined advertising campaign in the newspapers and business papers of the country. This campaign has been national in its scope, embracing every field of industry and has provided the wildest possible publicity. Once every month the war department program of sales is published throughout the country. Supplementing this, every important sale is extensively advertised so that industry and the public may be fully informed as to when and where sales are being held, what is being sold, and how to buy it. The advertising appeal has been directed always toward established business, and not to the speculator. At every point the greatest difficulties have had to be overcome in the way of hostile propaganda, caused by mistaken ideas of the effects of our policies or a lack of understanding of what is best for the public good.

I would like you to realize just what this campaign has done and is doing right now for us. In order that you may get some impression of its actual value, I am going to tell you of a certain incident.

In the latter part of October, 1919, we offered for sale, by sealed bids, about 100 lots of various textiles, which were to be sold as a whole, or by each lot, or in a minimum of 2000 yards of each lot. Bulletins containing descriptions of the merchandise, where stored, and other information, were sent out to a list of what was thought to be representative prospective buyers located in various sections of the country.

What Advertising Accomplished

News articles, not paid advertising, were run in a number of business papers and newspapers, mentioning the date of sale, some of the goods to be sold, and terms. We received the grand total of eight bids, none of them for any considerable quantity.

About two weeks later when our advertising policy had been approved, practically this same list of goods, for none of the eight bids received was accepted, was made the medium of our first attempt to make paid advertising an aid in selling our surplus. I do not recall just exactly how many bids were received, but it took our abstract division two whole days to make an abstract of the bids which we did receive for consideration.

Actual sales made amounted to approximately $780,000 and bids were rejected amounting to approximately $260,000. In other words, the bids received on the same list of goods which two weeks before had been advertised with only eight offers materializing, produced a total offering of more than $1,000,000, on merchandise which had been appraised at approximately $800,000. More important than this possibly is the fact that our surplus is being sold in practically every state in the union as against the very limited number of buyers prior to the introduction of advertising.

This has resulted, I believe, in our obtaining a greater percentage of returns to the government, of telling everyone everywhere what we have to sell when, where and how it will be sold, and removing any cause for complaint by reason of the prospective buyers not knowing of these sales, which condition may easily have prevailed under previous methods.

I particularly want to bring this thought to your direct attention, for the reason that I believe advertising to be one of the greatest forces in modern business, whether it be private or governmental, and I am morally certain that it has proven so in our own particular work.

Late in 1920 the assistant secretary of war was specifically charged with the sale or other disposition of surplus property, thus placing the office of the director of sales under his supervision. When Mr. Wainwright became assistant secretary, with the advent of the present administra-

Generated on 2024-08-28 00:23 GMT / https://hdl.handle.net/2027/mdp.39015043584120
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

tion, steps were taken for doubled activities in the disposal of surplus property, that business might proceed unhampered by this bugaboo of great stocks that might be dumped on the market. Mr. Wainwright has recently selected as his assistant, Col. J. P. McAdams, general staff, formerly deputy chief of staff, service of supplies of the A. E. F., whose vast fund of knowledge has proven of untold value in the solution of the many problems that continually arise.

The staff of the director of sales, Maj. Glen E. Edgerton, corps of engineers, is composed entirely of officers of the army. His chief assistant is Maj. C. D. Hartman, quartermaster corps. Both Major Edgerton and Major Hartman are officers of wide experience in supply matters, thoroughly schooled in business and economics. The present successful progress of liquidation is due to their careful administration, foresight and devotion to the public service.

Business Methods Used

In their determination to clean up matters quickly these officials have been aided greatly by the establishment of the bureau of the budget under General Dawes, and now so ably carried on by General Lord, and by the introduction of the principle of co-ordination and up-to-date methods of administration throughout the government's business organization, which permitted the huge supply of war surplus then remaining to become a still greater national asset. The establishment of the office of the chief co-ordinator, general supply, to operate directly under the bureau of the budget, and the appointment of Colonel Smither to that office was a further step forward in saving this huge war surplus for the common use of the people. Under the chief co-ordinator there was set up several boards, two of which were very much concerned with what was done with the surplus, the federal liquidation board and the federal purchasing board.

The chief co-ordinator through the medium of these two boards just mentioned, kept close check on the requisitions for purchase submitted by the various executive departments and on the material to be sold under the supervision of the director of sales. Material requisitioned for purchase and which was found in the war department's surplus stocks was transferred to the department in need, either with or without funds, as provided by law and the purchase requisition canceled. By this procedure alone, millions of dollars have been saved to the taxpayer.

The engineering department of the army required certain dredges in their operations which would have cost $349,500. Surplus boats in the hands of the quartermaster corps, which, if sold, would realize but a small fraction of their value, were transferred to meet this need. The money was saved. Again, the lighthouse service of the department of commerce, had an appropriation of $1,500,000 for the purchase of lighthouse tenders. The army transferred to this service mine planters, which were readily convertible, but which had little or no market value, and had they not been so transferred, would of necessity have been left rotting at the docks under continued expense to the government. A million and a half dollars was saved.

Likewise, large rentals have been saved by the prompt disposition of government surplus occupying leased storage. Some

FAMOUS CLIPPER SHIP BEACHED ON PUGET SOUND READY TO BE JUNKED

time ago the ordnance department declared surplus some 81,000 tons of sodium nitrate, storage on which was costing the government annually over $88,000. This nitrate was placed on the market at a time when it could be readily and easily absorbed, the government realizing on the sale $2,750,000 which sum was turned into the treasury, and this rental of more than $88,000 and other attendant expenses saved.

That you may the more fully realize what the proper use of this great war surplus has meant to the government in balancing its budget, and particularly to you who ultimately bear the burden of expense, let us refer to the figures for the last fiscal year, ending June 30, 1922. Transfers of the character just mentioned were valued at $147,297,000. The estimated savings on these transfers amounted to $44,546,335. In addition to this, there was turned into the treasury of the United States from the sale of surplus supplies, the sum of almost $90,000,000. This sum plus the savings by transfer more than equalled the pay of the army for the same period.

The total transfers authorized from the war department to other departments up to Jan. 1 of this year, were originally valued at nearly $318,000,000. Including these transfers the total amount reclaimed to the government during the period of liquidation to date is well over $1,250,000,000. And remember I have spoken of but one department. Our navy, too, has been on the job. Its problem, while not so large, has been handled in magnificent style.

Your government as a competitor in business is not wanted nor does it want to remain a competitor. As a representative of the common interests we both have in this matter, I think I may express the mutual satisfaction that we shall both experience when the auctioneer raises his hammer for the last time at the final sale, and Uncle Sam as a competitor takes the count, GOING, GOING, GONE!

Seek To Save Famous Old Clipper

An eleventh hour reprieve was granted the famous old American ship GLORY OF THE SEAS. While the hulk was being towed from Tacoma, Wash., to a nearby beach where it was intended to burn it for the metal, a telegram from Boston asked that destruction be deferred until further efforts were made to purchase the GLORY OF THE SEAS and preserve her as a relic.

The present owner of the ship, a Seattle junking firm, has agreed to await further word from eastern interests. In the meantime, the old sailer is lying on the beach awaiting final judgment.

Boston people interested in the early history of American shipping are planning to restore the GLORY OF THE SEAS as she was when mistress of the seas. This vessel is one of the last of the smart fleet of American clippers and it is the intention, if present plans mature, to moor her in Boston harbor as a proud relic of American supremacy on the ocean highways.

The GLORY OF THE SEAS was built at East Boston in 1869 and was the last masterpiece of Donald McKay, greatest American shipbuilder of the clipper era. In her early days, this vessel made many remarkable voyages as a tea clipper between Atlantic ports and the Orient. For thirty years, she has plied the Pacific in various trades. About ten years ago, she was purchased for use as a floating cold storage plant. Her stately spars and upper rigging were removed and she was equipped with expensive machinery for handling fish. Recently the equipment was removed and she was sold to junk men who plan to set the hull afire and salve the copper and other metals, unless Boston's civic pride arranges a permanent reprieve.

Generated on 2024-08-28 00:26 GMT / https://hdl.handle.net/2027/mdp.39015043584120
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

San Francisco Shipyards Are Merged

Articles of incorporation merging the Barnes & Tibbitts Shipbuilding & Drydock Co., Alameda, on the eastern shore of San Francisco bay, with the General Engineering Co., San Francisco, to form the General Engineering & Drydock Corp., have been filed in Oakland. Capitalization is $950,000 and the principal place of business will be the Alameda plant. The Barnes & Tibbitts company was purchased by the San Francisco firm early in December, but the merger was not complete until January. George A. Armes, president of the General Engineering Co., and former president of the Moore Shipbuilding Co., heads the new corporation. Other officers of the corporation are: John F. Mooney, vice president; James H. Young, secretary, and Attorneys Thomas A. Thacher and Harrison A. Jones, directors. Mr. Mooney and Mr. Young formerly were managers of the Skinner & Eddy shipbuilding plant at Seattle.

It is understood that $550,000 was paid for the Barnes & Tibbitts plant, the purchasing corporation having been granted authority to issue this amount in new stock by the state commissioner of corporations.

Ship Bids Are Opened

Walter E. Pommer of Pommer & Co., 1320 Majestic building, Milwaukee has opened bids on a 900-cubic yard sand sucker of hydraulic type to be built for Chicago interests. The power plant will be of the triple expansion type rated at 700 horse power and equipped with two boilers.

San Francisco Bay Yards Have Plenty of Work

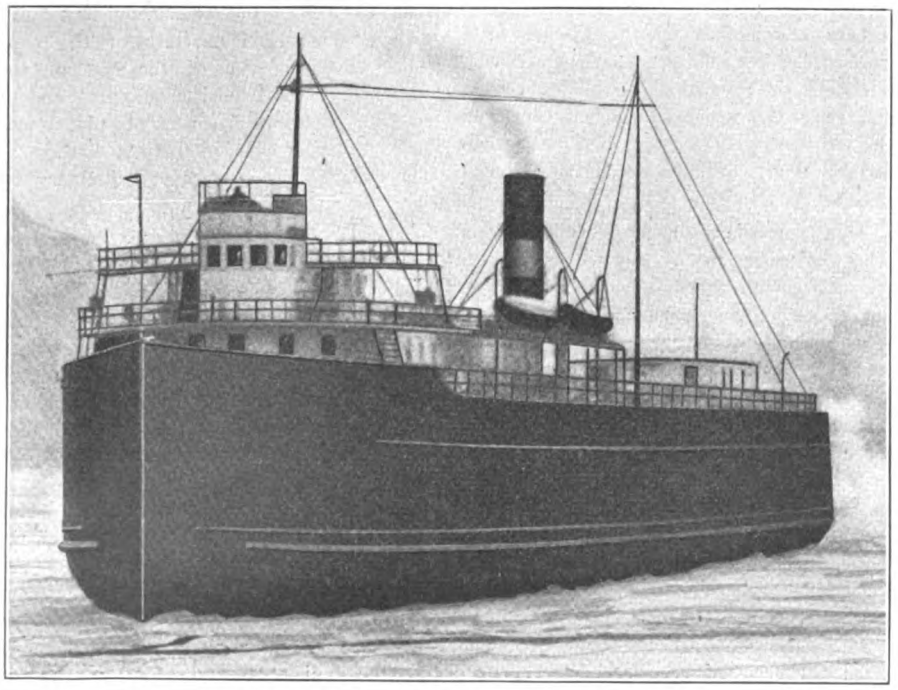
Shipyards at San Francisco, Oakland and Alameda, on San Francisco bay, are virtually back to normal. Shipbuilders on both sides of the bay declare more shipbuilding and repairing is now going on in the yards of these three cities than in all the rest of the yards on the Pacific coast combined. At no other time since the end of the war boom, have so many men been at work or so many ways busy as in these yards. While, of course, the amount of work does not approach that at the peak of the war activity, all these yards are doing practically the same amount of business they were doing before the war came on. This seems assured as the best peace year the San Francisco bay yards have had since 1914.

Lengthen and Repower Lake Carferry

ANN ARBOR railroad carferry No. 3, connecting Frankfort, Mich., and Manitowoc, Wis., recently left the plant of the Manitowoc Shipbuilding Corp. after receiving extensive alterations. The ship was placed in the large steel floating drydock, cut in two and lengthened 48 feet, giving her an increase in car carrying capacity of about 33 per cent. The keel length of the vessel is now 307 feet. New crew's quarters were fitted on the upper deck in a new deckhouse and the work involved also increased the passenger carrying capacity to a considerable extent.

During the lengthening operation, the old propelling machinery, consisting of two horizontal compound engines and two natural draft Scotch boilers, were removed and an entire new installation of modern propelling machinery was made.

This consisted of two triple expansion engines and two Scotch boilers operated under forced draft. The engines are of the vertical, 3-cylinder, direct-acting type directly connected to outboard turning propellers. As is usual on Great Lakes service, they are of the jet condensing type both exhausting into an independent condenser with a vertical double acting air pump of sufficient capacity to maintain a working vacuum of 24 inches with both main engines at full power.



LAKE CARFERRY AFTER BEING LENGTHENED AND FITTED WITH NEW PROPELLING EQUIPMENT

The cylinders are 15½, 26 and 44-inch diameter with a piston stroke of 26 inches and each engine is capable of developing 700 horsepower at 110 revolutions per minute. The handling gear of both engines is brought together at a central station between the engines on the lower engine room floor so that one operator can handle both.

The propellers are cast steel of the 4-blade solid type of sufficient weight to stand up under the severe ice condition of winter service.

Steam at a working pressure of 180 pounds per square inch is supplied by two Scotch boilers, 13 feet in diameter by 11 feet 6 inches long, each fitted with two corrugated furnaces of 48-inch inside diameter, with separate combustion chambers.

The boilers are operated under the Howden system of forced draft, the necessary air being supplied by a large engine driven fan, situated in the engine room. As usual with this system of draft, the air is highly heated before delivery to the ash pits.

The feed water to the boilers is heated to 210 degrees Fahr. before entering the boilers by being passed through a large heater of the Reilly type. The ashes are disposed of

Generated on 2024-08-28 00:14 GMT / https://hdl.handle.net/2027/mdp.39015043584120
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

through two ash guns operating with high pressure water jets and discharging overboard clear of the ship.

The vessel is fitted with a complete equipment of modern pumps, including ballast, feed, general service, sanitary and fresh water and is electrically lighted throughout by means of two 10-kilowatt generating sets, engine driven.

On her first trip after lengthening, the ANN ARBOR No. 3 made the trip from Manitowoc to Frankfort with 26 cars aboard at a speed exceeding 13 miles per hour, the average revolutions of the main engines being 105 per minute.

The Ann Arbor railroad initiated the first lake carferry movement where sea operation was contemplated, known to transportation. The idea was conceived by them in 1890 and at that time they constructed two wooden carferries Nos. 1 and 2. These vessels had a carrying capacity of approximately 24 cars, the cars being generally about 30 feet in length. The No. 1 and No. 2 were placed in commission in November and December, 1892. The first steel carferry now known as No. 3, was constructed and placed in operation in 1898 and in 1906 the No. 4 was put into service. The two wooden ferries were then retired. In 1910 ferry No. 5 was built and during 1917 ferry No. 6 was placed in commission. These vessels are so constructed and powered as to be able to navigate without any difficulty during the winter as well as the summer months.

Bethlehem Merges Two Baltimore Plants

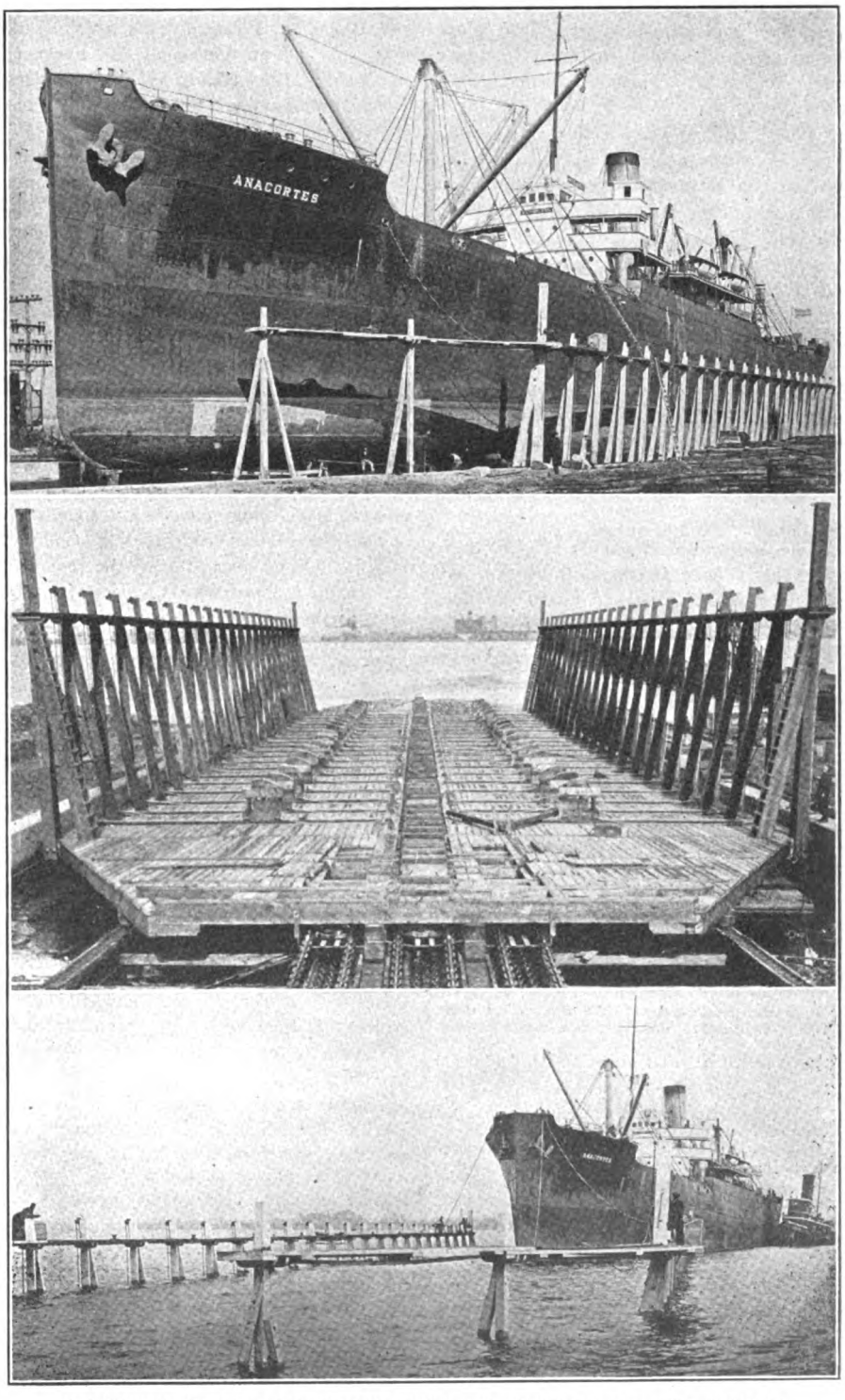
On March 1, 1923, the Bethlehem Shipbuilding Corp., Ltd., South Bethlehem, consolidated its shipbuilding and ship repairing interests in the Baltimore district under one local management, with headquarters at Sparrows Point, Md. J. M. Willis, previously general manager of the Baltimore Drydocks plant, is now the general manager of these consolidated plants, which will be known as the Baltimore Drydocks works and Sparrows Point works, of the Baltimore plant, Bethlehem Shipbuilding Corp., Ltd.

Edwin L. Andrew has been appointed assistant to the manager of the department of publicity of the Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa. He was graduated from the University of Wisconsin in 1916, after which he entered the employ of the Westinghouse company at East Pittsburgh on the apprenticeship course.

New Railway Drydock Built in Baltimore

The Union Shipbuilding Co., Baltimore, has put into operation for the first time its 4000-ton railway drydock by hauling the ANACORTES. drawing 8 feet 6 inches forward and 15 feet 6 inches aft, weighing at that displacement 4975 tons, or a 25 per cent overload for the dock.

This railway drydock was designed by the Crandall Engineering Co., Boston, and constructed by its field engineering force. The cradle and track are of heavy timber construction built principally of long-leaf yellow pine and Douglas fir. The cradle is built up so that the keel block line is nearly level. It is entirely decked over forming a convenient and safe platform where workmen may perform their tasks. On both sides of the cradle are uprights which support the docking platforms. On these docking platforms are located winches for operating the bilge blocks along the slides. The bilge blocks are



4000-TON RAILWAY DRYDOCK NOW IN SERVICE AT BALTIMORE

Generated on 2024-08-28 00:23 GMT / https://hdl.handle.net/2027/mdp.39015043584120
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

equipped with a patent releasing mechanism enabling the blocks to be quickly and easily released and replaced under full load.

The track is of the 4-way type resting on a foundation of yellow pine piling driven to refusal and accurately cut to gradient. The cradle runs on the track supported on free rollers which roll on heavy plates attached to the track and the cradle with the spacing of the rollers and width of plates proportioned to be commensurate with the lifetime of the dock. The underwater portion of the track was built ashore, then launched and carefully sunk into place between guides and fastened in place after a further check to assure alignment.

The cradle is drawn by six 2¼-inch railway chains, which are attached to the cradle by a patented device which equalizes the pull of the several chains. These are operated by a powerful hoisting machine composed of a train of heavy spur gearing actuated by an electric motor, alternating current type, 250-horsepower, 440 volts, 3 phase, 25 cycles. The machinery is equipped with an automatic and a hand brake for emergencies. It is arranged for two speeds depending on the load, being capable of lifting the full load on slow speed in 40 minutes.

The general dimensions of this new dock are: Length on keel blocks, 360 feet; breadth, 70 feet; draft on keel blocks forward, 15 feet; draft on keel blocks aft, 20 feet.

Vessel Sales by Shipping Board

BIDWELL, steel tanker, 10,254 deadweight tons, 7641 gross tons, to the Sun Shipbuilding Co., Chester, Pa.

MILLER COUNTY, steel tanker, 10,254 deadweight tons, 7366 gross tons, to the Sun Shipbuilding Co., Chester, Pa.

CHALLENGER, steel cargo, 11,850 deadweight tons, 7955 gross tons, to the Sun Shipbuilding Co., Chester, Pa.

These ships are sold with the purchaser obligated to install diesel machinery in place of the present installations.

DELFINA, steel cargo, 5263 deadweight tons, 3480 gross tons, to the Baltimore Steamship Co., Baltimore.

EASTERN SAILOR, steel cargo, 10,615 deadweight tons, 6600 gross tons, to the Columbia Pacific Shipping Co., Portland, Oreg.

KALEEN, steel ocean tug, 427 gross tons, to the Southern Transportation Co., Philadelphia.

KASHENA, steel ocean tug, 427 gross tons, to the Southern Transportation Co., Philadelphia.

WEST GREYLOCK, steel cargo, 10,978 deadweight tons, 7451 gross tons, to Frank V. Barnes, 32 Nassau street, New York.

KELDA, steel ocean tug, 427 gross tons, to the Eastern Transportation Co., Baltimore.

KIBEN, steel ocean tug, 427 gross tons, to the Eastern Transportation Co., Baltimore.

KITCHI, steel ocean tug, 427 gross tons, to the P. Dougherty Co. of Baltimore county, Baltimore.

KICKER, steel ocean tug, 427 gross tons, to the P. Dougherty Co. of Baltimore county, Baltimore.

DELISLE, steel cargo, 5264 deadweight tons, 3478 gross tons, to the Baltimore Steamship Co., Baltimore.

Shipyard Work on the North Pacific

Completing a contract of more than $200,000, Todd Dry Docks, Inc., Seattle, has turned over to the signal corps the remodeled cable steamer DELLWOOD, which has replaced the obsolete steamer BURNSIDE. The DELLWOOD at her recent trials made a splendid record. It is expected that she will be used during the coming summer to lay a new cable to Sitka, funds for which have been appropriated by congress.

The Canadian steel steamer MARGARET COUGHLIN, built at Vancouver, B. C., for Canadian Western Steamships, Ltd., was sold at auction early in February to satisfy the claims of bondholders. Bonds outstanding total $510,000. The vessel cost $1,250,000.

The only active steel shipbuilding yard in the Pacific northwest is that of the Todd Drydock & Construction Corp., Tacoma, where rapid work is being done in building a steel steamer for the Alaska Steamship Co. This plant is also completing three naval scout cruisers. There are now 2400 men on the company's payroll.

The wood freighter RUBAIYAT was launched recently at the Martinolich yard, Dockton, Wash. This vessel is 65 feet in length powered with a 75-horsepower semidiesel engine. She will be used for general freighting on Puget sound.

The St. Helens Shipbuilding Co., St. Helens, Oreg., has taken the contract for building two wood ferries for the Long-Bell Lumber Co. They will be each 120 feet in length and will be used to carry traffic across the Columbia river from Rainier, Oreg. The engines will be 140-horsepower Atlas Imperial diesel type. The estimated cost of the two vessels is $70,000.

The Dominion government has started suit to foreclose a mortgage of $18,711 and wind up the affairs of Victoria Shipowners and the Cholberg Co. During a period of unemployment three years ago, Victoria Shipowners was organized to build several wood sailing ships at Victoria, B. C. The enterprise was not a success and the government is now seeking to recover funds advanced to extend the plant and carry on operations.

The enlarged drydock of Todd Dry Docks, Inc., Seattle, is in frequent use as the government's 535's are each docked at this plant twice a year. With the facilities at Todd's, these large liners are handled without difficulty. To save time, the PRESIDENT JEFFERSON was recently overhauled while lying in berth, 150 workers from Todd's being engaged aboard for several days.

Advices from New York that the former Great Northern liner MINNESOTA had been sold to be junked aroused much interest in Pacific shipping circles. For nearly 10 years, the MINNESOTA, the largest vessel on the Pacific, plied between Seattle and the Orient. She never returned after being sold to the Atlantic early in the war period.

Satisfactory progress is being made in raising the wreck of the British steamer WELSH PRINCE, sunk last June in the Columbia river near Astoria, Oreg. After the leaks had been stopped by bulkheads, cables were stretched under the hull and it is gradually being worked into shallow water at ebb tide with the aid of heavy barges. The vessel is a total wreck and present operations are for the purpose of clearing the fairway.

The Pioneer Packing Co., Seattle, is building a floating cannery on a 1000-ton barge at a Puget sound yard. This strange craft will be towed to Alaska where it will can 1000 cases of clams daily in Cook inlet.

Portland, Oreg., capitalists, announce that they have purchased the shipping board freighter EASTERN SAILOR, to be renamed PETER KERR, after a pioneer exporter of Portland. It is intended to use the vessel in the Oriental trade and it is planned to make additional purchases until a Portland-owned fleet of considerable proportions is in operation.

The Pacific coast built steam schooner SAN RAMON, has been purchased from gulf interests and will return to Pacific waters to engage in the California trade. The steamer COLUMBIA was recently bought at New Orleans by California owners for $175,000. This vessel formerly operated on the west coast and will re-enter the lumber trade.

The port of Portland, Oreg., has purchased from the shipping board a set of two diesel engines of the McIntosh & Seymour marine type, to be installed in a new dredging plant to replace present equipment used on the Columbia river. The new engines are to be fitted for stationary operation. The port also contemplates reconstruction of the dredge PORTLAND, which was sunk in collision last October. It is planned to equip this vessel with a diesel electric plant of 2000-horsepower.

The Todd oil burning system is being installed in the ocean going tug HUMACONNA, which was recently purchased and brought from the Atlantic. Todd Dry Docks, Inc., obtained this contract in competitive bidding. The price is about $17,000.

The Seattle North Pacific Shipbuilding Co. has been made defendant in five suits asking $103,703 filed by former yard foremen. Plaintiffs state they were promised a share of a bonus for fast and efficient work during war building activity. The claims run from $11,000 to $37,000 each.

Generated on 2024-08-28 00:14 GMT / https://hdl.handle.net/2027/mdp.39015043584120
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Activities in the Marine Field

Latest News from Ships and Shipyards

Good Season Foretold by Ship Sales

PROSPECTS for a lake season with heavy freight offerings continue bright. The iron and steel industry is being driven to capacity with prices steadily mounting. As a result, iron ore demand is assured in volume sufficient to keep the freight fleet busy. The movement is expected to reach 55,000,000 tons and may run higher, as this figure was easily surpassed during the war. Coal shipments will be heavy as the northwest supply is low. Grain tonnage will depend upon the crop and the market. New ships are being completed, many sales are announced or planned and a large new fleet will be busy in the St. Lawrence grain trade.

* * *

A number of lake vessels have been sold in the past few weeks. The steamers SONORA and SULTANA were sold by G. A. Tomlinson to William Nicholson of the Nicholson Transportation Co., Detroit. The W. R. STAFFORD was sold by the Cleveland Builders Supply & Brick Co. and the JOHN M. MCKERCHEY by the United Fuel & Supply Co., Detroit, both to the Kelley Island Lime & Transportation Co., Cleveland. The wrecked passenger steamer ARROW was sold by the Sandusky & Islands Steamboat Co. to J. E. Murphy, Chicago, for rebuilding to run in Chicago harbor service. The EDWARD BUCKLEY has been bought by the Peninsular Towing Co., Wiarton, Ont., which recently sold its tug CRAWFORD to the Ontario Sand & Gravel Co., Windsor. The Cowles Shipyards Co., Buffalo, has sold the tug SEAFARER to H. J. Dickinson & Co., Toronto. The tug is one of the largest on the lakes, having been built for the government.

* * *

More vessels will run in the automobile trade this year. The bulk freighters SONORA and SULTANA recently sold, will be adapted for that trade. The POLYNESIA, now the A. D. MACBETH, and the small SAMUEL MATHER, now the CLIFTON, will run in this trade, managed and operated by Capt. M. F. Thompson of the Tristate Steamship Co., Cleveland. Seven steel steamers will be in the automobile trade this season.

* * *

The R. A. & W. M. Williams Co., ship broker, Cleveland, has changed its name to the Williams & Timmermann Co.

* * *

Possibly in a year, the Supreme Court may review the Detroit & Cleveland Navigation Co. case, provided the petitioner carries through the case. Some Michigan taxpayers sought to compel the company to reopen its service to upper Lake Huron ports, which the company abandoned after 50 years' service because it was unprofitable.

* * *

The 600-foot bulk freighter RICHARD V. LINDABURY, building by the American Shipbuilding Co., for the Pittsburgh Steamship Co., was launched at Lorain, O., on Feb. 24.

* * *

The WORRELL CLARKSON, 600-foot freighter, building by the Toledo Shipbuilding Co., for the Kinsman Transit Co., was scheduled for launching March 17. Keels for the big bulk freighter for the Reiss Steamship Co. and a self-unloader for the Huron Steamship Co., were to be laid at Toledo in March.

* * *

The Alaska Steamship Co., has sold the steamship JUNEAU to the Rutland Lake, Mich., Transportation Co., Chicago. The vessel, which for six years plied in the Seattle-Alaska trade, will sail for the Great Lakes in the near future, and there she will be operated between Chicago, Buffalo and Montreal in the grain carrying trade. The JUNEAU was constructed in 1908 by the Great Lakes Engineering Works, Ecorse, Mich. She is of 2382 gross tons register, 244 feet long, 43.2 feet wide and 27 feet deep. She will be loaded at Seattle and Puget Sound ports for the east coast.

* * *

The United States lake survey reports the monthly mean stages of the Great Lakes for the month of February, 1923, as follows:

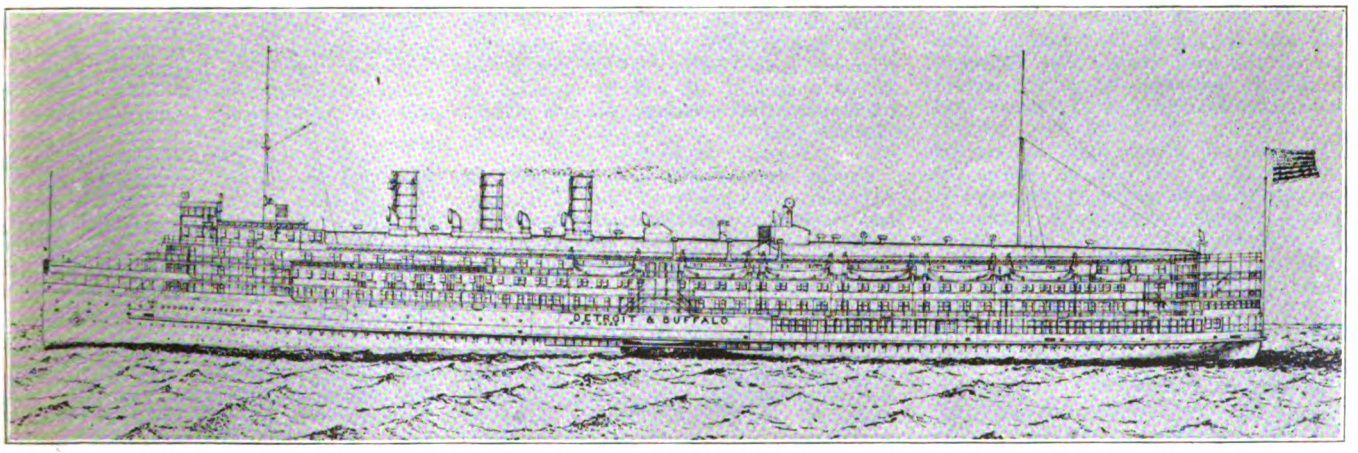
Lakes	Feet above mean sea level	
	January	February
Superior	601.86	601.60
Michigan-Huron .	579.02	578.81
St. Clair	573.70	573.07
Erie	571.17	570.88
Ontario	244.50	244.47

Along the Gulf Coast

A RECORD was established Feb. 14, at Galveston when four gangs of longshoremen discharged 13,568 bags of sugar from the Norwegian steamship RAVNANGER in a working day of eight hours. The previous record of 12,183 bags was established last year during the discharge of the American steamship LAKE FAIRLIE. The RAVNANGER is handled by the Lone Star Steamship Co. with George Wells and Bernard Kennedy in charge of the discharge of the cargo.

* * *

Daniel Ripley & Co. who for years have been steamship agents in Galves-



BIG SIDEWHEEL PASSENGER CARRIER NOW UNDER CONSTRUCTION BY D. & C. LINE FOR SERVICE BETWEEN DETROIT AND BUFFALO

Generated on 2024-08-28 00:15 GMT / https://hdl.handle.net/2027/mdp.39015043584120
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

ton, have recently incorporated under the laws of Texas for $100,000. They will remove their main office from Galveston to Houston out of which port they load shipping board vessels for two European berths. R. L. O'Brien, named in the charter as vice president of the company, will assume charge of the Galveston office while Walter T. Smith, president, will move to Houston to supervise operations there.

* * *

The Lone Star Steamship Co., Galveston, purchased its second vessel, the LAKE GERA, from the shipping board in February. She was redocumented out of Galveston and put into the Cuban-Porto Rican trade.

* * *

The total tonnage of vessels, foreign and coastwise, entering the port of Houston during the year 1922 was 2,804,627 tons as compared with 1,390,609 tons during the year 1921. The port of Houston was first opened in 1919, since which time the tonnage has grown from 97,727 tons to its present volume. The increased facilities to be provided by the $4,000,000 bond issue will further expand the tonnage of the port during the next two years.

* * *

The sum of $205,019 is provided in the budget for the maintenance of the port of Houston according to port director B. C. Allin.

* * *

With the final passage of the army appropriation bill, the completion of the east end extension of the Galveston seawall is assured. Galveston county has already completed its portion of the extension amounting to 3300 feet and the present appropriation assures the completion by the government of the whole project beyond Fort San Jacinto to the south jetty.

* * *

The Texas Sugar Refining Co. has requested bids for an 8-story refinery covering two blocks of ground to be built at Texas City, Tex. The company will have its own vessels as well as a wharf and dock facilities connected with the refinery by up-to-date conveyors. The collector of customs at Galveston is contemplating installing automatic scales for weighing the sugar as it is discharged from the vessels.

* * *

J. Merrow of J. Merrow & Co. announced in February his retirement from the steamship business in Galveston effective the early part of March. Mr. Merrow entered the steamship business in 1870. He will remove to San Pedro, Cal., and engage in the steamship business on the west coast. The agency of the Creole line will be taken over by the Texas Transport & Terminal Co.

* * *

The Bolivar Point light house, with Capt. James P. Brooks in charge, has been awarded the efficiency pennant for general efficiency during the year 1922. The pennant is four feet long and of distinctive design and will be flown from the lighthouse during the present year. The district of which Bolivar light is a part, extends from Cedar Keys, Fla., to Point Isabel, Tex., and embraces 40 stations.

* * *

The American gunboat, WHEELING, which has served as a training ship for naval reservists in Galveston for the past two years was towed in February by the tug BAYSPRING to Key West, Fla. From there she will be taken to Charleston, S. C., for general repairs.

* * *

Exports from Galveston to Japan, China and British India during the year 1922 amounted to $32,492,317 as compared with $29,697,935 for 1921. Of the total amount, Japan took $31,298,722; China $929,448 and India $264,147. The greater part of these exports consist of cotton and lubricating oil.

* * *

American flag vessels carried a higher percentage of the cotton shipped from gulf ports during the month of February than ever before, according to an announcement made by W. B. Keene, director of traffic of the shipping board. Of the total of 263,913 bales of cotton leaving the gulf ports, 165,456 bales, or approximately 63 per cent of the entire movement, were carried in American bottoms. The proportionate increase in business done by American vessels is due to the close adherence by American ship operators to their announced schedule of sailings.

* * *

C. S. Fay, traffic manager of the Southern Pacific Steamship Co. has announced the initiation of regular service between Boston and New Orleans. Cotton, lumber, rice, naval stores and other commodities which previously were transshipped from New York to the New England states will now be transported direct to Boston for distribution to interior points.

* * *

The two tugs BARWICK and BAYPORT were towed to Orange, Tex., to be placed in the shipping board storage yard. These vessels were recently returned to the shipping board by order of the court for failure of payment by the National Oil Co.

* * *

February cotton exports of the Far East out of Galveston totaled 65,010 bales as compared with 18,617 for the month of January. The Far Eastern trade has shown a substantial increase during the past year.

* * *

On Feb. 24, the interstate commerce commission made public a decision which places the railroad rates on cotton from the producing sections of Oklahoma and Arkansas to Galveston, Houston, and Texas City on an equality with the rates to New Orleans on a mileage basis. The new rates will become effective May 1 and it is expected that Galveston will be materially benefited.

* * *

The Gulf Coast Supply Co., Galveston, has been incorporated by A. S. Sheppard, W. H. Gilman and A. G. Anderson. Mr. Sheppard is president, George Ketchum, vice president, and Ben C. Doherty treasurer. A general stock of deck and engine room supplies will be handled.

From the Northwest

OFFICIALS of Portland, Oreg. are conducting an investigation into the practice of dumping fuel oil into the river. Considerable damage to log rafts and other floating property is reported.

* * *

The British steamer MARGARET COUGHLIN, built at Vancouver, B. C., three years ago at a cost of $1,250,000, was recently sold at auction for $176,000. The purchaser was John A. Kent, Toronto. It is understood that he represented the bondholders who foreclosed on an outstanding indebtedness of $510,000.

* * *

The Grays Harbor port commission has purchased an electric power dredge from the Tacoma Dredging Co. The price was $118,800. For some time, the port has been renting the equipment for $2,500 a month. It will be operated in maintaining the channel out of Grays Harbor ports.

* * *

During exceptionally severe weather in February, navigation in the Willamette and Columbia rivers was considerably impeded by floating ice. This is a condition that rarely occurs between Astoria and Portland.

* * *

As soon as official action has been taken, Vancouver, B. C., is expected to have $5,000,000 available for extended port improvement. The money is to be advanced as a loan by the dominion government. With these funds, Vancouver intends to spend $2,000,000 for a site and a large grain elevator. Completion of the Ballantyne pier, railway equipment, extension to the present elevator, storage yards and facilities, cold storage plant and other items are expected to account for the balance of the large sum.

* * *

The supreme court of the state of Washington has reaffirmed its previous decision that waterfront workers, injured when employed on board ships, are not under the jurisdiction of the state compensation act. This case was a friendly suit to establish the status of waterfront workers following the passage by congress of an act bearing on the subject.

* * *

In line with its general policy, the Pacific Steamship Co., the Admiral line, has announced that the passenger steamer SENATOR will be renamed ADMIRAL FISKE and the Alaska liner SPOKANE will be rechristened ADMIRAL ROGERS.

* * *

Portland ship operators, who recently petitioned the Oregon legislature to reduce pilotage fees showed that the pilotage charge for an average sized steamship entering the Columbia river to be $372 as against an average of $100 in Puget sound waters where pilotage is not compulsory.

* * *

Famous as the vessel in which Admiral Peary discovered the North Pole, the steamship ROOSEVELT has been sold at Seattle to the Washington Tug & Barge Co. The ROOSEVELT has an exceptionally staunch hull and powerful machinery. She will be overhauled and

Generated on 2024-08-28 00:24 GMT / https://hdl.handle.net/2027/mdp.39015043584120
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

adapted for heavy towing in north Pacific waters.

* * *

The steel steamships LAKE SHORE and LAKE BRIDGE, built on the Great Lakes, have been renamed OLYMPIC and CASCADE respectively. These vessels are now being used in the California lumber trade.

* * *

British Columbia officials are preparing to widen the channel in Vancouver harbor from 900 to 1200 feet and to dredge to a depth of 35 feet at low tide.

* * *

The first regular steamship service between north Pacific ports and South Africa will be established in March by J. J. Moore & Co., Inc. The steamship ATLANTIC CITY will inaugurate the service which will be permanent if conditions warrant.

* * *

Terminal rates on certain light weight commodities have been raised at Seattle by joint action of wharf operators. The increase is from 50 cents a ton wharfage and 40 cents handling to $1 and 80 cents respectively per weight ton. The increase does not affect shippers as it is absorbed by the carriers.

* * *

The fleet of the Ocean Motorship Co. has been taken over by the Pacific Steamship Co. and will be operated in the north Pacific. The vessels involved are the CETHANA, CHALLAMBRA, CULBURRA, BENOWA, BOOBYALLA, BABINDA and COOLCHA, since lost. These motorships are to be altered to fit them especially for the coastwise lumber carrying trade. These seven motorships were built at Olympia and Tacoma during the war on account of the Australian government.

* * *

The steel steamer POINT ARENA, 3300 tons deadweight, has been purchased for $90,000 by the Siler Mill Co. from the shipping board. This vessel was built by the Albina Engine Works, Portland, during the war. She will be operated as a coastwise lumber carrier.

* * *

In an attempt to reduce the tax burden, the Washington legislature is considering a bill which contemplates consolidation of county, city and port districts in the state's larger cities.

* * *

The old army transport SHERMAN, which has operated for many years to the Philippines, has been purchased by the Los Angeles Steamship Co., Los Angeles, renamed the CALAWAII, and put in the merchant service to the Hawaiian islands.

* * *

Another steamer, the J. L. LUCKENBACH, has been added to the intercoastal fleet of the Luckenbach lines. She is a steel twin screw steam of 8739 tons equipped with six twin masts.

Late News From Atlantic Seaboard

THE $3,250,000 coal pier now in course of construction for the Virginian railway lines at Norfolk, Va., which will be completed within a year, will have a capacity of a million tons a month and will mechanically trim all cargoes handled. It will be possible to dump 7200 tons of coal an hour when operating completely, trimming the cargoes in the holds of the ships.

* * *

The Munson Steamship Co., has announced that it will hereafter operate weekly sailings from Baltimore on its Havana, Cienfuegos and Santiago route. The Munson line has been active in Baltimore trade since 1912.

* * *

The movement of manganese ore into Baltimore is particularly active at this time, and the tonnage totals are increasing in volume weekly. Efforts are being made to arrive at a clearer definition in the interpretation of "delivery at ship's rail," with this cargo.

* * *

Baltimore's 1923 coffee tonnage, which is expected to approximate at least 200,000 bags, has begun with the arrival of the steamship COMMACK, with 16,750 bags for local delivery.

* * *

A tentative organization plan for the proposed North Atlantic Ports association has been worked out. Representatives from Norfolk, Va., Baltimore, Philadelphia, New York, Boston, Providence, R. I., and Portland, Me., were present at a meeting held recently in New York.

* * *

Baltimore's import trade is increasing in activity each week. Among the chief cargoes arriving are petroleum, copper, rubber, bananas, nitrate of soda, borate, wood-pulp, iron ore, sugar, sulphur, coffee, spices, paper and molasses.

* * *

Julean Arnold, commercial attache of the United States at Peking, China, visited Baltimore on March 1 and 2. He addressed assemblies of students of three Baltimore colleges and spoke at a special luncheon of the Baltimore Foreign Trade club, on the opportunities in Chinese markets for American business.

* * *

Total 1922 exports of grain for Baltimore are now placed at 88,555,199 bushels, an increase of more than 30,000,000 bushels over 1921. This grain tonnage ranks Baltimore as the third exporting port of the North American continent in this commodity. During 1922, the Pennsylvania railroad alone exported 36,541,162 bushels of grain through Baltimore.

* * *

Following the address at the Baltimore Foreign Trade club by William Werckentheim, export manager of the Island Petroleum Co., on the value of export commission houses, a committee was appointed by the club to consider the advisability of such an organization for that port.

* * *

Four vessels have now been added to the fleet of the new Porto Rico-American Steamship line, now operated between Baltimore and Porto Rican ports. The DELFINA and the DELISLE are the two latest additions to the fleet.

* * *

The new passenger and freight vessel, STATE OF VIRGINIA, of the Old Bay line, has arrived to begin operation from Baltimore.

* * *

The Chesapeake Steamship Co. has renovated its former steamer COLUMBIA, changing her name to the CITY OF ATLANTA.

* * *

The White Star line will resume its passenger service between Boston and Liverpool with the sailing of the steamship MEGANTIC on March 22.

* * *

March 17 has been selected for the launching of the new steamer BIRKSHIRE of the Merchants & Miners Transportation Co., at the plant of the Federal Shipbuilding Co., Kearny, N. J. The vessel is a duplicate of the ALLEGHENY launched on Dec. 22. Both vessels are 366 feet long, with a gross register of 4000 tons, and a speed of 13 knots. They cost $850,000 each.

* * *

Fishing as an industry is growing at the port of Boston. During one day recently, 26 vessels landed approximately 1,500,000 pounds of fresh ground fish at the south pier, and the total during a recent week was 4,000,000 pounds.

* * *

The LEVIATHAN, second largest ship in the world, is to be drydocked at South Boston, Mass., in the first week of May for underbody cleaning and painting and the installation of new propellers.

* * *

The Morgan line has extended its service to New England ports, and the steamer EL LAGO is scheduled to sail from New Orleans on March 22 for Boston.

* * *

The steamer GEORGE WASHINGTON was drydocked at the Charlestown, Mass., navy yard early in March for the purpose of having bottom cleaned, painted, and for other necessary repairs.

* * *

Hasler & Co., Norfolk, Va., are reported to have purchased three oil-burners, the NORTH AMERICAN, SOUTH AMERICAN and NORDAMERIKA, to operate between Hampton Roads and Atlantic coast and West Indian ports.

* * *

Boston received its first cargo of sugar from a new Cuban shipping point, Manopla, in February on the steamer LAKE FERNWOOD of the Atlantic Fruit Co. The port, which has been developed largely by Boston capital, is a south side port, located in Esperanza bay, near Santa Cruz del Sur.

Generated on 2024-08-28 00:15 GMT / https://hdl.handle.net/2027/mdp.39015043584120
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Marine Business Statistics Condensed

Record of Traffic at Principal American Ports for Past Year

New York

(Exclusive of Domestic)

Month	—Entrances— No. ships	Net tonnage	—Clearances— No. ships	Net tonnage
February, 1923.	395	1,437,919	413	1,529,096
January	423	1,679,843	439	1,690,010
December, 1922.	397	1,569,778	473	1,819,341
November	426	1,626,068	463	1,805,798
October	452	1,846,327	467	1,848,637
September	519	1,985,981	542	2,104,884
August	515	1,772,837	508	1,865,798
July	509	1,928,541	520	1,977,690
June	486	1,718,879	551	2,070,048
May	524	1,769,601	496	1,759,780
April	454	1,651,584	473	1,758,160
March	462	1,708,727	484	1,829,016
February	414	1,548,412	391	1,533,163

Philadelphia

(Including Chester, Wilmington and the whole Philadelphia port district)
(Exclusive of Domestic)

Month	—Entrances— No. ships	Net tonnage	—Clearances— No. ships	Net tonnage
February, 1923.	67	160,678	54	139,701
January	98	287,240	64	182,402
December, 1922..	78	209,962	63	167,736
November	75	221,130	78	241,326
October	80	205,137	73	202,326
September	103	261,963	74	224,079
August	104	273,123	76	222,478
July	116	307,058	84	248,337
June	103	282,251	83	233,964
May	117	310,117	80	234,220
April	94	245,785	63	197,807
March	107	288,295	79	257,149
February	94	240,663	62	189,140

Norfolk and Newport News

(Exclusive of Domestic)

Month	—Entrances— No. ships	Net tonnage	—Clearances— No. ships	Net tonnage
February, 1923..	8	24,958	42	130,121
January	14	41,127	44	121,152
December, 1922..	19	52,716	40	137,081
November	6	21,036	38	118,738
October	17	44,423	46	149,670
September	5	22,051	45	132,751
August	15	43,887	51	158,879
July	22	62,986	55	158,254
June	22	73,791	56	175,961
May	21	61,513	73	198,599
April	18	59,180	83	232,485
March	29	77,775	79	235,809
February	24	66,156	72	192,640

San Francisco

(Exclusive of Domestic)

Month	—Entrances— No. ships	Net tonnage	—Clearances— No. ships	Net tonnage
February, 1923.	47	165,333	60	214,686
January	51	156,249	65	216,083
December, 1922..	54	187,648	68	234,385
November	42	154,024	42	154,280
October	59	159,855	69	261,687
September	52	163,697	65	233,079
August	65	221,288	68	219,326
July	64	194,586	55	191,574
June	51	182,219	47	161,761
May	50	170,506	56	191,858
April	50	174,713	54	190,928
March	52	185,391	58	188,930
February	47	158,210	54	184,296

Baltimore

(Exclusive of Domestic)

Month	—Entrances— No. ships	Net tonnage	—Clearances— No. ships	Net tonnage
February, 1923.	80	240,133	94	275,291
January	115	322,661	110	306,393
December, 1922..	110	322,948	104	380,616
November	114	361,162	132	403,593
October	97	289,239	101	304,431
September	107	333,387	112	298,444
August	110	326,163	106	300,080
July	103	320,104	90	280,394
June	99	280,002	118	333,877
May	117	350,494	103	282,285
April	98	277,582	110	319,103
March	107	323,515	125	362,451
February	93	294,309	103	334,507

Seattle

(Exclusive of Domestic)

Month	—Entrances— No. ships	Net tonnage	—Clearances— No. ships	Net tonnage
February, 1923	26	120,548	39	156,258
January	27	125,551	36	155,129
(Inclusive of Domestic)				
December, 1922.	201	560,159	198	564,367
November	138	374,871	139	374,871
October	164	417,901	148	406,498
September	159	375,340	159	382,079
August	162	396,363	153	387,908
July	140	373,211	137	371,526
June	139	384,290	137	354,702
May	138	357,583	150	361,835
April	129	328,172	154	365,057
March	198	508,760	202	515,606
February	159	478,849	147	417,425

New Orleans

(Exclusive of Domestic)

Month	—Entrances— No. ships	Net tonnage	—Clearances— No. ships	Net tonnage
February, 1923	204	559,638	206	539,965
January	242	713,589	233	695,524
December, 1922.	211	543,884	222	573,111
November	220	598,306	219	599,150
October	239	630,306	235	625,605
September	212	555,017	223	571,299
August	249	625,819	250	629,150
July	227	570,709	236	601,740
June	253	596,752	234	587,483
May	236	632,495	230	610,916
April	221	565,559	225	594,842
March	235	643,251	258	716,568
February	197	582,189	201	576,973

Boston

(Exclusive of Domestic)

Month	—Entrances— No. ships	Net tonnage	—Clearances— No. ships	Net tonnage
February, 1923	102	323,880	48	128,949
January	148	429,849	61	160,090
December, 1922.	138	383,366	61	181,975
November	130	357,264	59	123,255
October	149	408,855	91	217,899
September	193	511,027	101	248,328
August	192	449,871	116	203,774
July	159	324,795	94	229,492
June	137	169,015	94	161,888
May	133	251,304	104	192,231
April	71	138,683	103	270,499
March	85	241,289	56	135,671
February	76	218,853	58	153,350

Mobile

(Exclusive of Domestic)

Month	—Entrances— No. ships	Net tonnage	—Clearances— No. ships	Net tonnage
February, 1923	83	186,479	72	160,777
January	77	145,151	67	153,001
December, 1922.	66	123,746	56	119,821
November	68	147,775	53	130,769
October	59	143,207	52	110,398
September	66	121,037	51	85,801
August	60	112,431	65	137,552
July	79	152,475	73	138,543
June	77	153,357	76	141,413
May	61	109,793	55	114,691
April	61	144,237	62	123,238
March	73	136,937	57	110,363
February	54	122,606	59	117,172

Los Angeles

(Exclusive of Domestic)

Month	—Entrances— No. ships	Net tonnage	—Clearances— No. ships	Net tonnage
February, 1923.	86	148,957	83	137,564
January	91	153,564	92	141,332
December, 1922.	133	132,114	76	83,537
November	110	111,803	111	112,934
October	117	115,548	138	94,522
September	61	127,969	96	133,561
August	52	143,931	43	117,758
July	44	125,139	48	138,275
June	48	109,261	38	90,915
May	47	141,219	55	174,644
April	53	161,709	45	138,927
March	75	172,471	59	139,424
February	76	105,243	63	108,207

Key West

(Exclusive of Domestic)

Month	—Entrances— No. ships	Net tonnage	—Clearances— No. ships	Net tonnage
February, 1923.	69	68,735	64	68,658
January	89	81,622	86	79,210
December, 1922.	74	77,623	78	85,839
November	69	71,740	70	71,705
October	61	67,755	64	77,225
September	57	64,645	59	62,676
August	65	69,962	61	65,883
July	67	80,673	67	85,336
June	60	73,308	58	73,842
May	89	107,629	82	101,318
April	77	81,917	81	86,471
March	97	78,984	92	76,531
February	84	67,080	78	68,137

Portland, Me.

(Exclusive of Domestic)

Month	—Entrances— No. ships	Net tonnage	—Clearances— No. ships	Net tonnage
February, 1923.	33	91,190	36	100,312
January	49	144,429	42	126,949
December, 1922.	48	144,019	48	136,247
November	22	45,567	21	46,755
October	27	60,114	22	49,594
September	32	68,125	27	57,609
August	28	42,746	28	47,459
July	19	39,950	20	39,571
June	11	16,601	15	21,765
May	16	21,380	10	22,477
April	14	51,228	18	62,091
March	23	81,938	20	77,044
February	23	73,634	24	75,625

Savannah

(Exclusive of Domestic)

Month	—Entrances— No. Ships	Net Tonnage	—Clearances— No. Ships	Net Tonnage
February, 1923.	31	87,315	31	87,703
January	28	93,564	28	93,587
December, 1922	22	66,619	17	57,279
November	14	41,665	15	40,606
October	19	52,065	19	46,054
September	26	68,878	26	73,540
August	22	63,662	22	59,974
July	23	66,833	23	61,655
June	11	24,870	20	53,367
May	11	20,536	16	40,181
April	8	20,485	15	42,591
March	6	12,845	19	47,946
February	9	17,568	15	40,622

Galveston

(Exclusive of Domestic)

Month	—Entrances— No. Ships	Net Tonnage	—Clearances— No. Ships	Net tonnage
February, 1923	48	146,944	76	233,591
January	69	219,967	89	282,889
December, 1922.	64	214,952	79	260,159
November	56	174,964	87	304,352
October	59	156,587	85	260,702
September	48	144,403	56	187,724
August	59	180,814	63	203,194
July	52	165,276	50	186,201
June	61	193,016	61	200,957
May	60	196,575	52	200,787
April	64	190,675	61	210,853
March	66	155,728	56	166,298
February	45	134,229	48	138,482

Portland, Oreg.

(Exclusive of Domestic)

Month	—Entrances— No. Ships	Net Tonnage	—Clearances— No. Ships	Net Tonnage
February, 1923	100	264,371	99	257,402
January	95	265,440	101	286,806
December, 1922.	98	266,774	107	291,126
November	98	266,706	105	283,881
October	109	290,048	109	267,006
September	111	313,168	108	298,452
August	102	256,671	103	259,170
July	95	254,553	88	233,744
June	104	300,517	110	319,637
May	85	226,853	88	230,176
April	89	245,702	90	244,402
March	99	264,306	105	283,361
February	85	232,786	82	220,175

Generated on 2024-08-28 00:16 GMT / https://hdl.handle.net/2027/mdp.39015043584120
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Marine Business Statistics Condensed

Port Traffic Record

Houston

(Exclusive of Domestic)

Month	—Entrances— No. ships	Net tonnage	—Clearances— No. ships	Net tonnage
February, 1923....	49	50,379	48	167,872
January	49	36,744	52	146,532
December, 1922...	58	70,948	53	195,322
November	65	72,192	63	215,043
October	55	57,106	53	168,254
September	43	46,600	43	97,005
August	35	40,503	32	63,281
July	29	30,909	32	73,299
June	38	48,938	36	74,798
May	44	45,108	42	134,046
April	42	61,751	47	98,825
March	48	45,312	40	105,309
February	28	27,173	30	86,028

Port Arthur, Tex.

(Exclusive of Domestic)

Month	—Entrances— No. ships	Net tonnage	—Clearances— No. ships	Net tonnage
February, 1923	52	172,273	44	142,554
January	52	184,683	61	220,314
December, 1922	59	210,778	65	218,274
November	42	143,551	47	154,010
October	68	227,039	66	217,502
September	53	158,181	57	168,681
August	69	227,941	70	224,654
July	88	296,956	82	270,263
June	81	271,752	87	285,633
May	90	303,623	88	292,595
April	90	282,288	101	313,829
March	91	318,679	87	269,369
February	73	233,148	81	250,138

Providence

(Exclusive of Domestic)

Month	—Entrances— No. ships	Net tonnage	—Clearances— No. ships	Net tonnage
February, 1923.	17	56,353	10	39,840
January	13	45,175	12	52,651
December, 1922	6	23,609	8	29,871
November	11	47,565	10	31,470
October	9	31,293	9	31,232
September	30	84,037	13	40,223
August	18	61,741	11	38,649
July	10	19,279	7	22,228
June	10	31,095	7	17,423
May	14	49,985	13	37,000
April	9	24,854	7	31,049
March	12	45,966	8	34,272
February	13	53,367	11	46,372

Six North Pacific Ships Lost in February

February, 1923 passed into history as one of the most disastrous months in the annals of north Pacific shipping. Six vessels were totally wrecked but by a fortunate turn of fate not one human life was sacrificed. The underwriters will long remember last month as one of heavy losses, the property involved aggregating more than $3,000,000.

The total losses include the following:

American wooden motorship SIERRA, bound from Bellingham for San Pedro with lumber, in collision off San Francisco with Hawaiian liner WILHELMINA; towed into San Francisco but so seriously damaged that repairs are out of the question.

American wooden steamship NIKA, bound from Seattle for San Pedro with lumber, burned off Vancouver island.

American steel steamship SANTA RITA, bound from San Pedro for Seattle, wrecked off Vancouver island.

British steel steamship TUSCAN PRINCE, bound from United Kingdom ports for Vancouver, B. C., and Puget sound, wrecked off Vancouver island.

American wood motorship COOLCHA, bound from San Francisco for British Columbia ports, wrecked off Vancouver island.

American wood schooner, WATSON A. WEST, bound from Grays Harbor for San Pedro with lumber, wrecked on San Miguel island, California coast.

The TUSCAN PRINCE and cargo were valued at $2,000,000; the NIKA and cargo at $215,000; SANTA RITA, $250,000; COOLCHA, $150,000; SIERRA, $150,000; WATSON A. WEST and cargo $50,000.

The four vessels wrecked off Vancouver island were lost within 48 hours. With the exception of the NIKA, these disasters were due to an unusually heavy snowstorm and gale which swept the north Pacific. The NIKA became disabled and before aid reached her, fire developed in the coal bunkers and the vessel became a total loss.

The United States coast guard and seagoing tugs figured bravely and conspicuously in the rescue of the crews. Particular credit is given the coast guard SNOHOMISH which returned to Puget sound with 105 survivors.

The NIKA was a war period craft built at Pascagoula, Miss. She was brought to the Pacific early last year and in August went ashore close to the point where the burning hulk finally grounded. She was sold at marshal's sale and purchased for use in Alaska. Her owners had temporarily diverted her to the coastwise lumber trade. The COOLCHA was built at Olympia, Wash., during the war for the Australian government but for some time she had been owned by north Pacific interests, operating in the California trade. She was bound for Victoria where she was to be taken over and operated by the Pacific Steamship Co.

Since she had not made that port she was still owned by W. Leslie Comyn upon whom the entire loss falls as she was not insured.

Record of Traffic Through Panama Canal

		Atlantic to Pacific traffic —Panama Canal— No. of ships	Net tonnage	Tons of cargo	Pacific to Atlantic traffic —Panama Canal— No. of ships	Net tonnage	Tons of cargo	Total traffic through canal —Panama Canal— No. of ships	Net tonnage	Tons of cargo
1923										
January	American	88	450,254	313,094	67	320,300*	462,245	155	770,554	775,339
	Foreign	106	473,524	285,649	91	366,614	530,944	197	840,138	816,593
	Total	194	923,778	598,743	158	686,914	993,189	352	1,610,692	1,591,932
1922										
December-	**American**	**78**	**365,857**	**328,924**	**68**	**344,847**	**551,907**	**146**	**710,704**	**880,831**
	Foreign	**83**	**352,020**	**231,494**	**75**	**312,539**	**422,777**	**158**	**664,559**	**654,271**
	Total	**161**	**717,877**	**560,418**	**143**	**657,386**	**974,684**	**304**	**1,375,263**	**1,535,102**
November	American	65	324,783	234,500	55	273,293	416,515	120	598,076	651,015
	Foreign	83	370,180	266,878	91	369,024	508,967	174	739,204	775,845
	Total	148	694,963	501,378	146	642,317	925,482	294	1,337,280	1,426,860
October	American	70	328,229	264,171	51	250,606	385,196	121	578,835	649,367
	Foreign	89	384,223	300,904	84	347,334	495,592	173	731,557	796,496
	Total	159	712,452	565,075	135	597,940	880,788	294	1,310,392	1,445,863
September	American	54	260,249	226,741	53	235,008	315,898	107	495,257	542,639
	Foreign	72	322,167	241,095	61	252,986	354,454	133	575,153	595,549
	Total	126	582,416	467,836	114	487,994	670,352	240	1,070,410	1,138,188
August	American	58	261,613	257,674	48	236,669	305,838	106	498,282	563,512
	Foreign	83	350,249	299,087	68	235,602	303,351	151	585,851	602,438
	Total	141	611,862	556,761	116	472,271	609,189	257	1,084,133	1,165,950
July	American	52	250,378	246,471	55	272,868	335,154	107	523,246	581,625
	Foreign	76	323,853	295,941	68	280,772	333,534	144	604,625	629,475
	Total	128	574,231	542,412	123	553,640	668,688	251	1,127,871	1,211,100
June	American	57	256,060	269,098	45	205,063	211,373	102	461,123	480,466
	Foreign	78	338,136	317,284	48	171,454	179,728	126	509,590	497,012
	Total	135	594,196	586,377	93	376,517	391,101	228	970,713	977,478
May	American	59	285,265	343,913	49	226,356	264,626	108	511,621	608,539
	Foreign	75	309,448	329,485	60	211,747	220,483	135	521,195	549,968
	Total	134	594,713	673,398	109	438,103	485,109	243	1,032,816	1,158,567
April	American	47	220,055	260,442	48	223,913	238,420	95	443,968	498,462
	Foreign	74	300,633	301,991	61	230,232	245,194	135	530,865	547,585
	Total	121	520,688	562,433	109	454,145	483,614	230	974,833	1,046,047
March	American	57	256,613	239,696	46	215,547	219,569	103	472,160	459,265
	Foreign	81	329,428	342,256	50	174,223	158,568	131	503,651	500,824
	Total	138	586,041	581,952	96	389,770	378,137	234	975,811	960,089
February	American	46	199,564	186,486	42	192,931	193,643	88	392,495	380,129
	Foreign	68	288,441	256,339	56	205,599	201,606	124	494,040	457,945
	Total	114	488,005	442,825	98	398,530	395,249	212	886,535	838,074
					Vessels in Ballast					
1923										
January	American	29	181,617	0	2	10,141	0	31	191,758	0
	Foreign	26	109,586	0	1	4,942	0	27	114,528	0
	Total	55	291,203	0	3	15,083	0	58	306,286	0

Generated on 2024-08-28 00:15 GMT / https://hdl.handle.net/2027/mdp.39015043584120
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Late Flashes On Marine Disasters

Brief Summaries of Recent Maritime Casualties— A Record of Collisions, Wrecks, Fires and Losses

Vessel	Date	Nature	Place	Damage Resulting
Aiora	Feb. 14	Ashore	Cape Lookout	Not stated
Alembic	Feb. 13	Gales	At sea	Lost sails
Aspen	Feb. 10	Heavy sea	At sea	To bridge
Aster	Feb. 28	Disabled	Ferroll	Steerer dam.
Algiers	Feb. 26	Ice	Philadelphia	Bow dam.
Arkansas	Feb. 19	Heavy sea	Portland	To bridge
Acacia	Feb. 20	Collision	Lunenburg	Not stated
Angeline C. Nunan	Feb. 7	Collision	Boston	Slight
Adonis	Feb. 7	Collision	Boston	Slight
A. B. Barteaux	Mar. 6	Not stated	At sea	Sank
Augusta G. Hilton	Mar. 7	Drag anchor	West Chop Light	Ashore
Black Dragon	Jan. 24	Collision	Gibraltar	Considerable
Bridgeton	Feb. 7	Collision	New York	Not stated
Bremerton	Feb. 7	Collision	New York	Not stated
Bellingham	Feb. 7	Heavy sea	At sea	Deck dam.
Birk	Feb. 10	Heavy sea	At sea	To lifeboats
Babdina	Mar. 3	Fire	Santa Cruz	Not stated
Blair	Feb. 10	Leaking	St. Michaels	To cargo
Buttercup	Mar. 1	Rammed str.	New Orleans	Not stated
Croxteth Hall	Feb. 10	Disabled	New York	Eng. trouble
Coolcha	Feb. 15	Ashore	Albert Head	On rocks
Coyote	Feb. 10	Grounded	Seven Foot Knoll	Not stated
Carolinas	Feb. 15	Ashore	At sea	Undamaged
City of Bombay	Feb. 16	Disabled	New York	Ropein prop.
Coyote	Feb. 19	Hit rock	Cuttyhunk Island	Hole in bot.
Commercial Spirit	Feb. 19	Grounded	Sparrows Point	Not stated
Chautaugua	Feb. 14	Fouled str.	Yarmouth	Slight
Cohasset	Feb. 17	Disabled	St. Michaels	Dam. mach.
City of Edinburgh	Feb. 20	Fire	Philadelphia	Slight
Chicago City	Feb. 20	Disabled	Halifax	Rudder dis.
Concord	Feb. 23	Ashore	Harts Island	Not stated
Cheetowaga	Feb. 22	Ice	Penobscot Bay	Broke blade
Commercial Pathfinder	Feb. 22	Ashore	Marcus Hook	Not stated
China Maru	Feb. 26	Ashore	Salonica	Undam.
City of Canton	Feb. 9	Hit shoal	Cape Cod	Slight
Castor	Mar. 8	Not stated	North River	Sank
Champion	Mar. 8	Burned	Staten Island	Heavy
Dehanney	Feb. 11	Sank	New York	Raised
Donald II	Feb.	Heavy sea	At sea	Rig dam.
Dorin	Feb. 16	Abandoned	At sea	Heavy
Dallas	Feb. 17	Disabled	At sea	Steerer dis.
Dalzelline	Feb. 23	Ice	Hackensack River	Damaged
Devon City	Feb. 23	Heavy sea	Barry	Rud. dam.
Estelle Krieger	Feb. 9	Ashore	Barnegat	Not stated
Ethel B. Penney	Feb. 9	Ashore	Lovells Island	Leaking
Esperanza	Feb. 19	Fire	Cayo Lavantado	Total loss
Eastern Tempest	Feb. 19	Disabled	Highland	Eng. dis.
Elkhorn	Feb. 21	Disabled	Havre	Boil. defect.
Eastern Star	Feb. 26	Fire	Philadelphia	Not stated
El Sud	Feb. 27	Collision	New York	Not stated
Edna Bright Hough	Mar. 5	Disabled	North Point	Sails gone
Erie Maru	Mar. 7	Stranded	Cuba	Not stated
E. M. Roberts	Mar. 7	Lost anch.	Great Point	Ashore
Fritzoe	Feb. 9	Stranded	Caycristo Light-house	Not stated
Franconia	Feb. 14	Drag. anch.	Plymouth	Ashore
Friendship	Feb. 19	Disabled	Norfolk	Not stated
Fredk. J. Lovatt	Feb. 20	Ice	Boston	In tow
Frank H. Adams	Feb. 28	Abandoned	Vigo	In tow
Frank R. Forsey	Feb. 26	Col., sank	New York	Slight
Galveston	Feb. 10	Not stated	Leixoes	Sank
Gladys E. Whidden	Feb. 14	In ice	Parrsboro	Heavy
George Allen	Feb. 21	Grounded	Philadelphia	Not stated
Gulf of Mexico	Feb. 28	Disabled	New York	Lost blade
General Jacobs	Feb. 3	Stranded	Langlade	Slight
Glenwhite	Feb. 8	Grounded	Norfolk	Damaged
Gansfjord	Mar. 1	Grounded	New Orleans	Floated
Giant King	Feb. 28	Rudder dis.	Yarmouth	Leaking
Hambleton Range	Feb. 7	Disabled	Fastnet Rock	Rud. broke
Heffron	Feb. 16	Disabled	At sea	Lost prop.
Hughli	Feb. 17	Fire	Bermuda	To hold
H. K. Waage	Feb. 21	In ice	Canso	Not stated
Henry D. McCord	Feb. 22	Sank	Atlantic	Raised
Hilma Pauline	Feb. 22	Not stated	At sea	Abandoned
Hercules	Feb. 24	Grounded	Tinicum Island	Not stated

Vessel	Date	Nature	Place	Damage Resulting
Indian	Feb. 14	Disabled	Boston	Engine dis.
James O'Neill	Mar. 2	Crushed by ice	St. Pierre	Aban. sank
Jobshaven	Mar. 8	Disabled	New York	Eng. dis.
Kyle	Feb. 8	Storms	St. Pierre	Steerer dis.
Knud	Feb. 7	Ice	At sea	Forepeak dam.
Kaisho Maru	Feb. 23	Disabled	At sea	Rud. dam.
Lancastrian	Jan. 24	Drag. anch.	Gibraltar	Hit stmr.
La Marseillaise	Feb. 8	Disabled	Fayal	Eng. dam.
Lenape	Feb. 27	Collision	New York	Heavy
Lurline	Feb. 28	Ashore	Bush Point	Slight
Lutzen	Feb. 23	Disabled	Bermuda	Machy. dis.
Lightship No. 90	Mar. 7	On ledge	Woods Hole	Abandoned
Moncenisio	Feb. 15	Gale	N. J. coast	Sinking
Monmouth	Feb. 14	Disabled	North Point	Steerer dis.
Mildred Adams	Feb. 20	Collision	Lunenburg	Heavy
Melania	Feb. 28	In distress	At sea	Rud. broke
Mayari	Feb. 26	Ashore	Hart's Island	Plates dam.
Melmore Head	Feb. 21	Heavy seas	At sea	To bridge
Manchester Corp.	Feb. 6	Struck	Halifax	Not stated
Nika	Feb. 15	Disabled	Umatilla Rock	Lost prop.
Novian	Feb. 21	Fire	Houston	In bunkers
Normannia	Mar. 6	Fog	Cape Henry	Grounded
Ocean Maid	Feb.	Fire	Lunenburg	Heavy
Ossining	Feb. 13	Ashore	Rosario	Not stated
Onega	Feb. 17	Disabled	At sea	Rud. shaft broke
Onaway	Mar. 1	Leaking	Fayal	Lost boats
Paulsboro	Jan. 8	Grounded	Salem Cove	Jettis. car.
Princess	Feb. 14	Fouled	Yarmouth	Slight
Pro Patria	Mar. 3	In ice	St. Pierre	Disabled
Panama Maru	Mar. 1	Rammed	New Orleans	Heavy
Rapidan	Feb. 6	Gale	At sea	Steer. dis.
Sagua	Feb. 27	Leaking	Holtenau	Bot. dam.
Storaker	Feb. 26	Water, hold	Cape Race	Abandoned
Springfield	Feb. 28	Ashore	Morris Island	Floated
Suwanee	Feb. 28	Rud. broke	Manchester	Jettis. car.
Sherman	Feb. 26	In distress	Savannah	Out of fuel
Stanley	Mar. 3	In ice	Louisburg	Not stated
Santino	Feb. 17	Storm	Nantucket	Sank
Stella Karer	Feb. 9	Ashore	Ship bottom	Not stated
Sheaf Mount	Feb. 7	Hurricane	At sea	Steerer dis.
Saugerties	Feb. 10	Not stated	Leixoes	Sank
Santa Rita	Feb. 15	Struck reef	Washington coast	Not stated
San Paticio	Feb. 12	Disabled	At sea	Prop. dis.
Scotia Maiden	Feb. 10	Abandoned	At sea	On fire
Sinsinawa	Feb. 13	Fire	Marseilles	To cotton
Sabara	Feb. 12	Disabled	New Orleans	Eng. dis.
Sagua	Feb. 16	Fire	Hoboken	Sunk
Schroon	Feb. 16	Ashore	River Weser	Slight
Santonio	Feb. 20	Gale	Nantucket	Sank
Shebay	Feb. 21	In ice	Canso	Not stated
Schoharie	Feb. 18	Leaking	Halifax	Jettis. car.
Tuscan Prince	Feb. 15	Ashore	Puget Sound	Breaking up
Trialos	Feb. 21	Grounded	Diamond Reef	Not stated
Vilda M.	Mar. 5	Grounded	New York	Not stated
Virginia	Mar. 8	Collision	River Thames	Damaged
Workman	Feb. 9	Collision	At sea	Sank
Winnebago	Feb. 9	Disabled	London	Steerer dis.
Willis L. King	Feb. 15	Gale	Port Huron	Slight
West Arrow	Feb. 10	Disabled	Falmouth	Steerer dam.
West Hematite	Feb. 16	Ashore	River Weser	Jettis. car.
Wm. Boyce Thompson	Feb. 19	Ashore	Tampico	Rud. post
West Campgaw	Feb. 9	Disabled	At sea	Lost blade
Welland County	Feb. 15	Heavy sea	At sea	Slight
West Helix	Feb. 24	Disabled	St. Michaels	Mach. dam.
Willis A. Holden	Feb. 24	Ashore	Currituck Beach	Not stated
William H. Smith	Feb. 28	Disabled	Sydney	Sails gone
West Elcasco	Mar. 4	Fire	St. Michaels	Not stated

An Interesting Launching

One of Spain's new scout cruisers, nearing completion, recently launched herself without warning into Ferrol bay. The accidental launching occurred in the early morning with no one about except the guards. It is supposed that some of the timbers gave way. The cruiser took the water and moved across the bay and came to a stop on the opposite shore without mishap.

A new water trade route has been tested out by the Germans. The Hamburg Shipping Co. dispatched a specially built steamer of 200 gross tons to Persia with a miscellaneous cargo of sugar, sewing machines, bicycles, underwear and shoes. The vessel passed through the North and Baltic seas, Gulf of Finland, the St. Mary canal system through Lake Ladoga to the Volga and through the Caspian sea to Enseli, Persia. The shipping company, it is reported, has decided to take up the service and has ordered several ships of a type suited to this route.

Generated on 2024-08-28 00:14 GMT / https://hdl.handle.net/2027/mdp.39015043584120
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Business News for the Marine Trade

TWO jetties, a new elevator, additional storage at the present elevator, an unloading shed, and a system of carriers are among the recommendations of John Rolph, Montreal, who made personal investigations of the grain handling facilities of Vancouver, B. C., recently. His suggestions regarding elevators would increase the present capacity of 1,250,000 bushels by 2,200,000 bushels. The new proposed elevator is of 1,500,000 bushels capacity, while in addition to this, two more grain elevators, each exceeding in size and facilities the present government elevator, and a 500,000 bushel capacity added to the latter structure, are included in the present plans of the Vancouver harbor board.

* * *

Definite announcement that a syndicate of New York and Philadelphia capitalists has acquired 30 acres of waterfront property in Berkley near Norfolk, and will establish a large industrial plant, operated along lines of the Bush Terminal Co., New York, has been made. The property, located on the inner harbor, has a frontage of 2800 feet on the waterfront. The entire frontage will be dredged and the Norfolk-Portsmouth Belt Line railway has arranged to extend connections to the plant through rights of way already obtained by the syndicate.

* * *

Capitalized at $25,000, the Lallier Steamship Co., Galveston, Tex., has been incorporated by Frank A. Lallier, A. S. Gladwin and John Hurley Jr. Mr. Lallier is president of the company and Mr. Gladwin is secretary.

* * *

Capitalized at $50,000, the Quincy Compressor & Pump Co., 217 Main street, Quincy, Ill., recently was incorporated by Mac Irwin, C. H. Irwin and H. C. Gates. The company is represented by Mac Irwin, 206½ West Twenty-fourth street, Quincy.

* * *

The Southgate Marine Corp., Norfolk, Va., with a maximum capital stock of $100,00 and a minimum of $50,000, has been granted a charter by the Virginia state corporation commission. It is authorized to purchase, lease, construct, maintain and operate steamship lines and other means of water transportation, to operate tugs, warehouses and docks. Incorporators are T. S. Southgate, president; D. M. Thornton and H. B. Rogers, vice presidents, and Elias Etheridge, secretary. These officers with Hugh W. Davis, comprise the directorate. The corporation plans to operate steamship lines along the Atlantic seaboard, the Gulf of Mexico, through the Panama canal and to the western coast of the United States, as well as the east and west coasts of South and Central America.

* * *

The Planet Steamship Corp., Portland, Me., has been incorporated to build steamships, etc., with 100,000 shares of no par value by M. E. Foster, M. G. O'Neil, A. B. Farnham and others.

* * *

A 40,000-ton drydock will be erected by the Todd Shipyards Corp., 25 Broadway, New York. According to tentative plans the dock will be more than 900 feet in length.

* * *

The Noank Shipyard, Inc., which was formerly the Robert Palmer & Son Shipbuilding & Marine Railway Co., is now actively engaged in building wooden vessels and doing general repair work.

* * *

Eastern Steamships Co., Ltd., has been incorporated with $1,000,000 capital stock with offices at Port Colborne, Ont., to own and operate 10 steel steamers, now building in Great Britain for April and May delivery. The officers of the company are President, Nisbet Grammer, who also is president of the Eastern Grain, Mill & Elevator Corp., Buffalo; vice president and treasurer, J. J. Rammacher; vice president, E. T. Douglass and secretary, N. B. Macpherson.

* * *

The I. P. Morris branch of the William Cramp & Sons Ship & Engine Building Co., Philadelphia, has perfected arrangements with the Dominion Engineering Works, Ltd., Montreal, Que., for the production of turbines and parts for hydroelectric power service at the latter plant for the Canadian trade.

* * *

Traveling cranes and other equipment will be installed in the freight terminal to be erected by the Portland Terminal Co., Portland, Me., at an estimated cost of $1,500,000. The present capacity will be tripled.

* * *

The Baltimore Ship Repair Co., Inc., Baltimore, has acquired the property at Covington and Montgomery streets, Baltimore, for a new plant.

* * *

The Great Central Forward Co., New York, recently was incorporated under the laws of Delaware with a capital stock of $12,000.

* * *

Capitalized at $2,000,000, the Porto Rican American Steamship Corp, has been incorporated under the laws of Delaware by William H. Stayton Jr., William H. Stayton Sr., and Arthur J. J. Townsend, Baltimore.

* * *

The Polarus Shipping Co., ship broker, has been incorporated under the laws of Delaware with a capital stock of $125,000. It was incorporated by T. N. Ageapeyeff, Marcel Levy and Charles Dunaif, all of New York.

* * *

The Canadian-American Bureau of Trade, New York, shipping agent, has been incorporated under the laws of New York with a capital stock of $20,000 by E. B. Beacham, D. W. Harris and T. R. Fleming.

* * *

The Fort Myers Steamship Co., Ft. Myers, Fla., recently was incorporated with a capital stock of $100,000 by I. W. Riggs, Harry Botts and others.

* * *

With a capital stock of $1,000,000, the New York Port Terminal Co. recently was incorporated under the laws of Delaware to build docks, etc.

Business Changes

NORTON, LILLY & CO., one of the oldest and best known shipping concerns, have opened an office in Boston at 131 State street. The company was established in 1841, and Boston is the thirteenth city in the United States in which offices have been opened.

* * *

H. J. Ham, for many years connected with the W. N. Proctor Co., has formed a new firm to be known as H. J. Ham & Co. to engage in the business of export freight forwarders and import agents. Offices will be at 10 State street, Boston, Room 511.

* * *

The Foamite-Childs Corp., Utica, N. Y., a consolidation of the Foamite Firefoam Co., and the O. J. Childs Co., Inc., has taken over the manufacturing and distributing activities of the Fire Gun Mfg. Co., New York. The district office at New York is now located at 183 Varick street, New York. The factory and general offices of the Foamite-Childs Corp. are at Utica, N. Y.

Generated on 2024-08-28 00:25 GMT / https://hdl.handle.net/2027/mdp.39015043584120
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

Equipment Used Afloat, Ashore

Improvements in Furnace Bridge Walls Outlined and Their Uses and Advantages Analyzed

FURNACES of a boiler are the chambers where the fuel is burned. For burning coal, a grate consisting of individual cast iron bars resting on cross supports is fitted, with the top surface of the bars slightly below the center line of the furnace at the front and sloping down toward the back, so that at the back end the surface is from 4 to 6 inches below the center line.

In order to retain the fuel on the grate, it is necessary to have a wall or projection extending above the grate to a sufficient height so that the average thickness of the fire can be kept on the grate without spilling over into the back ends. For this purpose, a wall 9 to 10 inches above the grate is sufficient. The usual practice has been to have an angle bar or plate of cast iron resting in the corrugation of the furnace and projecting above the grate bars in order to serve as backing for a wall built up of fire brick.

As the ship goes on her voyage and the fires are sliced from time to time, this brick wall naturally deteriorates, crumbles, and is more or less damaged in the course of a short period of time. This means that the fire brick bridge wall has to be rebuilt frequently, practically after each voyage of any duration. Furthermore, clinkers become attached to the wall and also fill the spaces between the grate bars at this end, thus reducing the effective grate surface, by deadening the fire on account of lack of air for combustion, which of course is particularly important due to the need of a hot fire at this point completely to burn the gases. Attempts were made years ago to substitute for this brick wall, one made up of cast iron. With steady improvement in design, the cast iron wall is now firmly established in good practice and is meeting the condition of service successfully.

Important features in the design of what may be called a mechanical bridge wall of cast iron are:

1.—An installation which can be quickly and easily made without use of studs or bolts necessitating the piercing in any manner of the furnace shell.

2.—Provision for the passage of air from the inner end of the ash pan through the wall so that proper and complete combustion may take place.

3.—Arrangement such that any part or parts, particularly those parts most subject to deterioration in service, may be readily replaced from spares carried without disarranging the remainder of the wall.

4.—First cost including installation, and maintenance costs to be such as to show a marked saving over the use of the fire brick wall.

5.—That the use of a mechanical cast iron bridge wall in fact increases the efficiency of boiler operation.

At least two furnace bridge walls are successfully meeting the severe conditions of service.

One type is manufactured by the Wager Furnace Bridge Wall Co., Inc., 108 Academy street, Jersey City, N. J., and is shown in Figs. 1, 2 and 3. In principle, it is a sloping vertical grate with individual sections or bars of cast iron. Fig. 1 illustrates the shape of the individual sections. These are gray iron, and clinkers will not readily adhere. The sections are so designed as to leave air spaces between, admitting air from the ash pan.

The installation for an ordinary furnace is shown in Fig. 3, representing a longitudinal section through the furnace. The view of this section at the back end, Fig. 3, indicates the different parts clearly. Across the back end of the furnace, a vertical cast iron plate with a narrow flanged top is fitted to a corrugation. This plate is supported by cast iron angle brackets fitting into the corrugations at each side and bolted to the vertical plate near its top edge. With this as the ground work, a horizontal cast iron plate is bolted to the horizontal flange at the top of the vertical cross plate, with its ends resting on the cast iron angle brackets at the sides. Then the lower support for the bridge wall sections is bolted through the horizontal cast iron plate and the flange of the vertical support. The upper part for supporting the sections is in turn bolted to the lower part.

With the above parts in place, the wall proper is readily installed by merely slipping into place the individual sections making up the bridge wall. The two sections on the extreme ends are cast to the shape of the corrugation and are consequently special

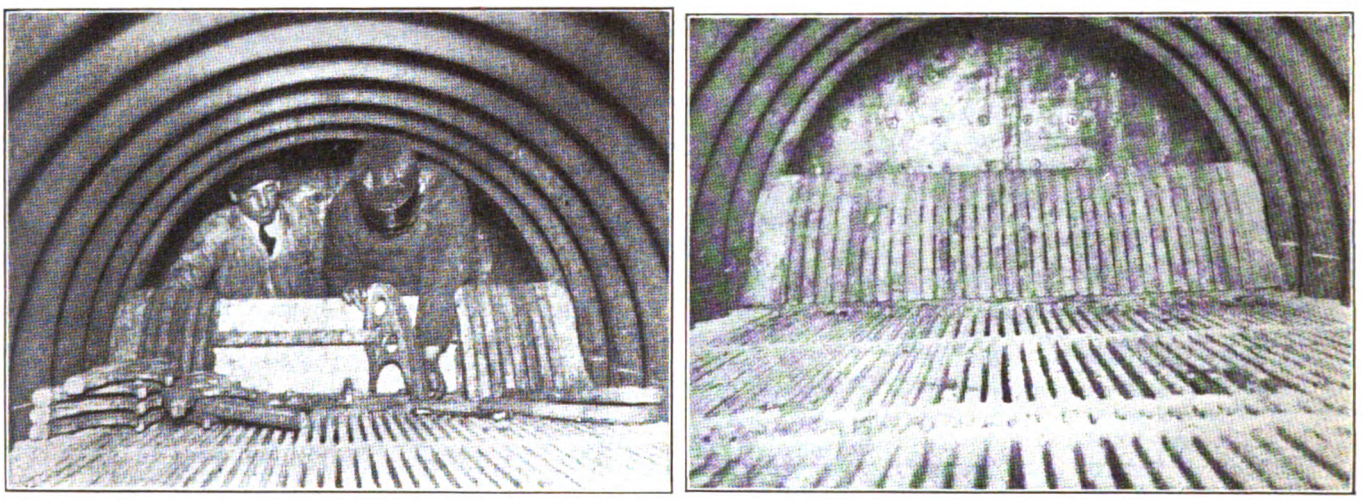


FIG. 1—INSTALLATION OF FURNACE BRIDGE WALL, SHOWING SHAPE OF SECTIONS, AND SIMPLICITY OF FITTING IN PLACE. FIG. 2—SAME FURNACE AS IN FIG. 1 BUT WITH INSTALLATION COMPLETE

Generated on 2024-08-28 00:25 GMT / https://hdl.handle.net/2027/mdp.39015043584120
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

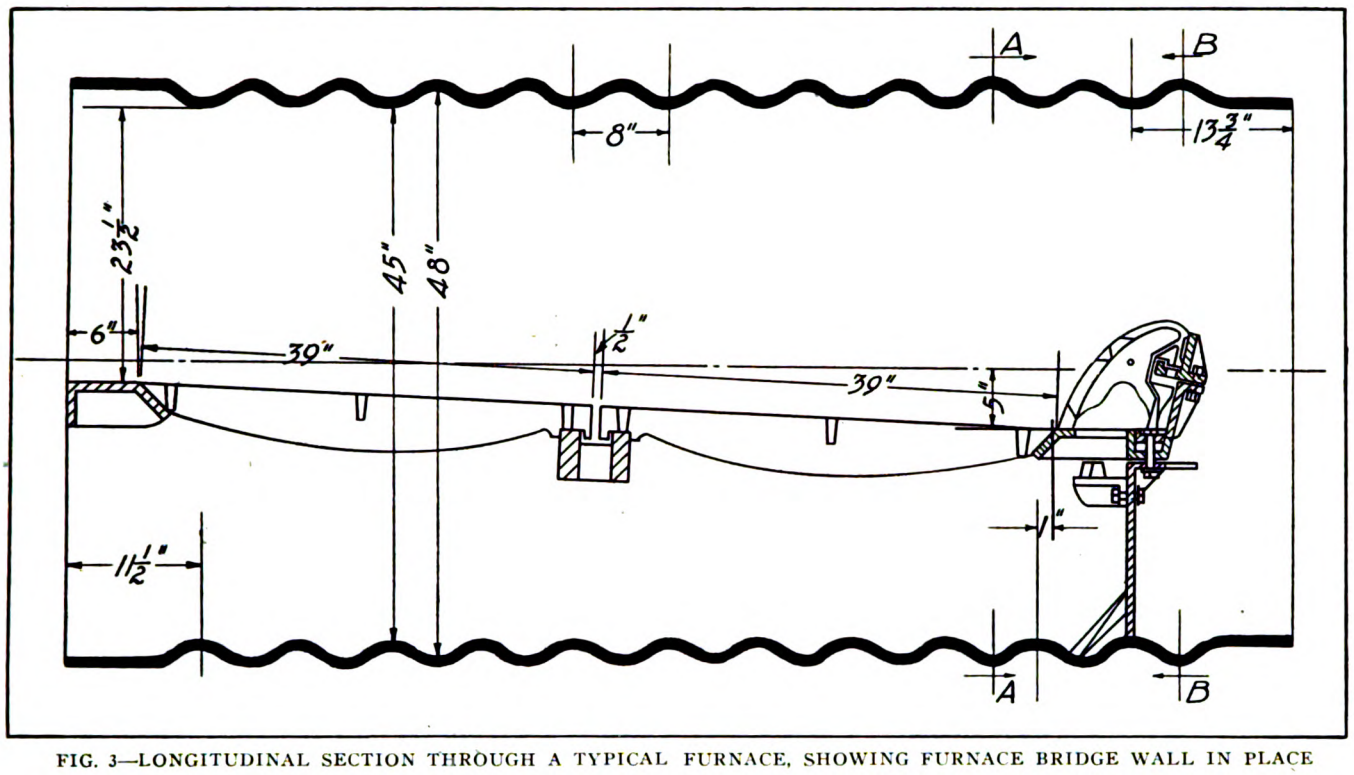


FIG. 3—LONGITUDINAL SECTION THROUGH A TYPICAL FURNACE, SHOWING FURNACE BRIDGE WALL IN PLACE

for different shapes of furnaces. A few narrow sections for spacing are used as necessary completely to fill the space, with sufficient clearance, between the end sections. For repairs it is only necessary to remove any one or any number of sections and replace them by new ones.

In a similar way, the supporting work for the sections is divided into parts so that any portion may be removed and renewed without disturbing the remainder. Fig. 1 shows a photograph of an installation in process, while Fig. 2 shows the installation complete.

Sturrock Furnace Bridge Wall

This wall is manufactured by W. W. Booth, 26 Cortland street, New York, and is shown in Figs. 4, 5 and 6. As shown in the longitudinal section through a furnace, Fig. 5, this wall consists of three major component parts, the vertical baffle plate, the base casting and the sections. To give a clear and comprehensive description it is best to consider each major division in order as it is installed.

1.—The vertical baffle plate of cast iron is placed transversely in the furnace. It is cast in the shape of a segment of a circle and conforms to the shape of the furnace. Angle lugs cast in the baffle at its lower center tend to steady it in a corrugation.

The top of the baffle plate forms a seat and support for the base casting and in this manner distributes the weight of the wall uniformly to the lower half of the furnace.

2.—A base casting placed horizontally extends across the width of the furnace and rests on and is bolted to the vertical baffle plate. The ends of the base casting are shaped to fit into and conform to the corrugations in the furnace at the sides, thus preventing any longitudinal shifting and forming a bracket brace for the vertical baffle plate. A beveled or hooked shape is given the front of the base casting as conditions may require, to carry the inner ends of the grate bars. Near the rear of the base casting there is a transverse vertical projection or rib on which the sections hook on and are locked in place.

3.—Fig. 6 illustrates one of the standard sections which goes to make up the bridge wall proper. These flat triangular sections are placed side by side for the full width of the furnace with their bottom surfaces resting on the horizontal surface of the casting. The rear leg of the section at the base has a U-shaped opening which hooks over the vertical rib on the base casting, thus locking the section in place though not interfering with the necessary play for contraction or

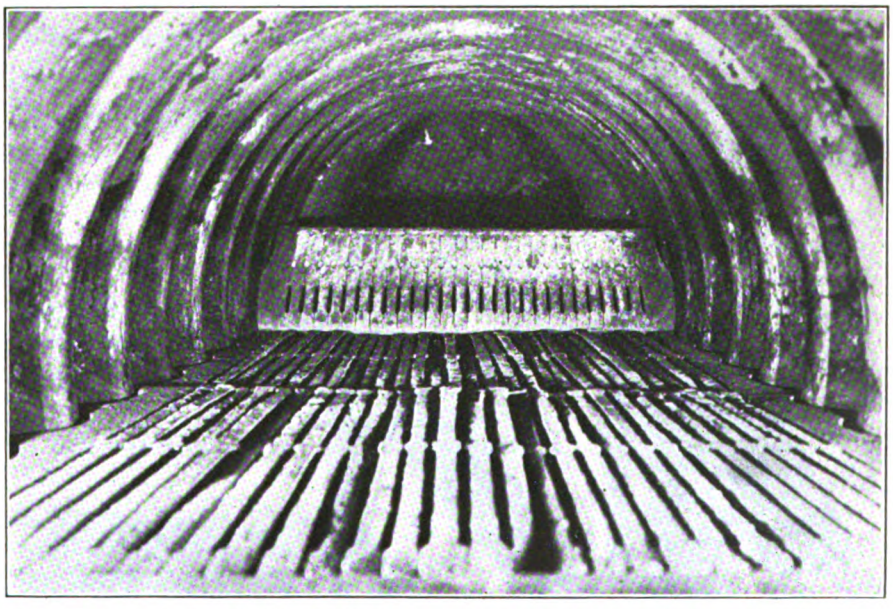


FIG. 4—EXCELLENT CONDITION OF A FURNACE BRIDGE WALL OF THE TYPE SHOWN IN FIGS. 5 AND 6 AFTER TWO AND ONE-HALF YEARS OF SERVICE

Generated on 2024-08-28 00:15 GMT / https://hdl.handle.net/2027/mdp.39015043584120
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN

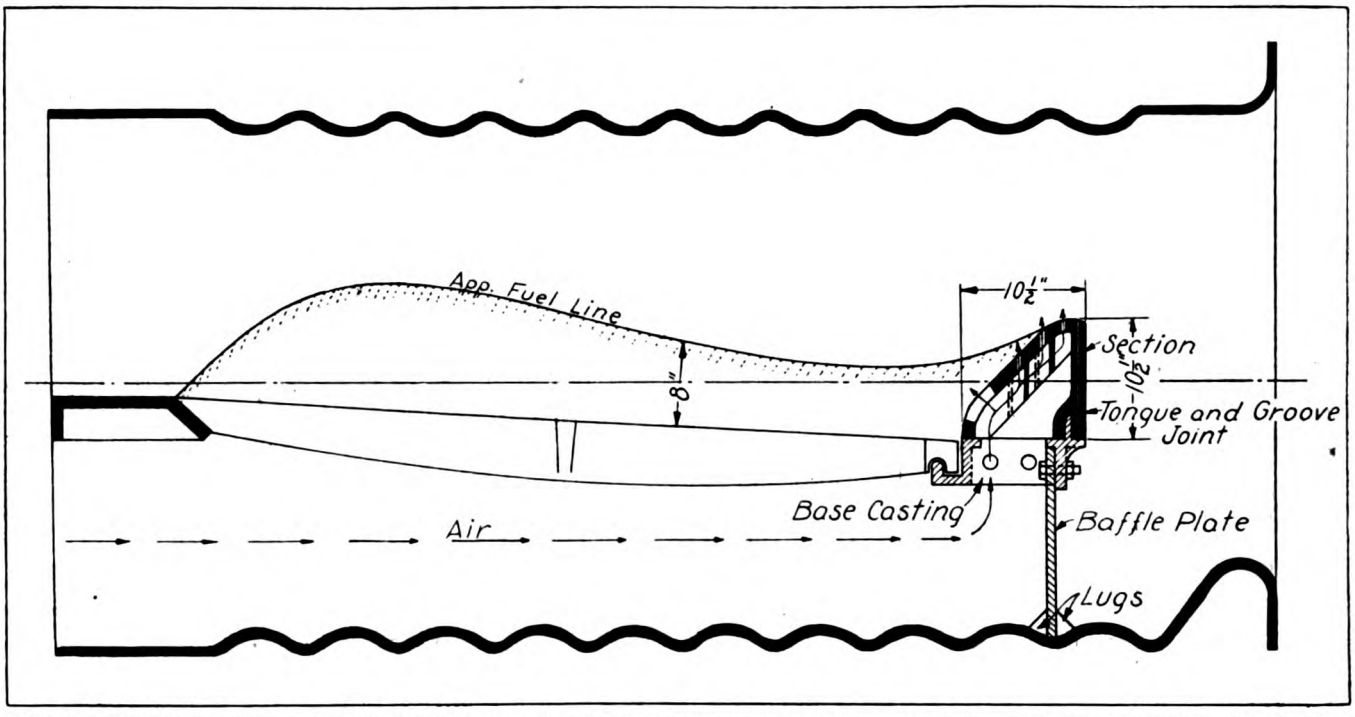


FIG. 5—LONGITUDINAL SECTION THROUGH A TYPICAL FURNACE, SHOWING A DIFFERENT TYPE OF FURNACE BRIDGE WALL IN PLACE

expansion or any other cause. The vertical rear part of the section is provided alternately with a vertical tongue and groove, forming when completely built up an interlocking air-tight back wall which is at the same time flexible so that warping will not take place. The extreme end sections are made to fit the corrugations.

How the Bridge Wall Operates

Air passes under the grates until it is stopped by the vertical baffle and deflected upward through the opening in the horizontal surface of the base casting and in turn around the air controlling baffles cast on the sides of the individual sections where it is heated and distributed to the openings through the inclined surface of the sections and on to the fuel gases. The openings admitting air have been designed and proved in practice to admit the proper amount of oxygen for complete combustion of the fuel. It is claimed that a saving of 7 per cent in fuel can be made by the use of the cast iron bridge wall over that with the ordinary fire brick wall. This is exclusive of the large saving in upkeep. It is estimated for a nine furnace job in a voyage around the world, a distance of approximately 29,000 miles, that brick bridge walls would need to be rebuilt about 15 times at an estimated total cost of $5000 while the approximate total cost of the installation of a cast iron bridge wall for this job would be $1500, with no repairs necessary at the end of such a voyage. Fig. 4 clearly shows the excellent condition of a Sturrock bridge wall after two and one-half years' service.

Advantage of Cast Iron Walls

By the use of cast iron bridge walls, the complete grate surface is available for burning the fuel at all times. Air is admitted for proper combustion. Consequently, complete combustion occurs at the proper place so that full use is made of the heat in the fuel and it is not wasted by being carried off in partially burned gases through the smokestack. Another decided advantage is the fact that walls of this kind do not need to be rebuilt after comparatively short voyages. With proper care there is no reason why cast iron bridge walls should not continue in good condition for an indefinite period, thus saving the expense, delay, and trouble of rebuilding walls. Another important feature is the ease and quickness with which these walls may be taken down and removed in case a change is desired from coal to oil and also the ease of installation when a change from oil to coal is contemplated.

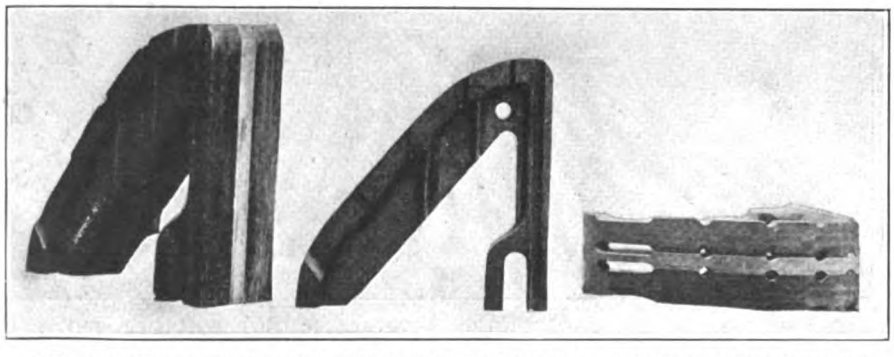


FIG. 6—ONE OF THE INDIVIDUAL SECTIONS OF A FURNACE BRIDGE WALL

Causes of Accidents To Ships In 1922

Classified returns of casualties to vessels of more than 500 tons during the year 1922, are shown by the Liverpool Underwriters' association as follows:

Nature of Casualty—	Losses— Total	Partial
Weather damage	2	492
Founderings and abandonments	65	...
Strandings	86	1,425
Collisions	18	1,818
Fires and explosions	26	509
Missing	19	...
Damage to machinery, shafts and propellers	..	1,041
Other casualties	..	1,184
Total (1922)	216	6,469

B. Olney Hough, for many years past, editor of the *American Exporter*, has relinquished that position to establish himself as export counsellor, consultant and adviser to banks, exporters, and manufacturers, with offices under the style of B. Olney Hough, Inc., 17 Battery place, New York.

Generated on 2024-08-28 00:17 GMT / https://hdl.handle.net/2027/mdp.39015043584120
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF MICHIGAN